

MIND

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OF

PSYCHOLOGY AND PHILOSOPHY

I.—NOTES ON THE SECOND PART OF
SPINOZA'S *ETHICS* (II).

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§ 4. PARALLELISM OF THE ATTRIBUTES (II, 7).

ON any interpretation of Spinoza's metaphysical doctrine the seventh proposition of Part II is a proposition of the highest importance, but on the interpretation which I believe to be, on the whole, the right one, the seventh proposition becomes the most important proposition in the whole book. Spinoza at one time, as we know, used the term substance to denote what in the *Ethics* he calls attribute, so that, instead of saying that the one and only substance has infinitely many attributes, he could then have said that *Natura* consists of infinitely many substances. Robinson takes this earlier phraseology as the clue to the interpretation of the metaphysical doctrine of the *Ethics*, and insists again and again that Spinoza's doctrine is not an *Identitätsphilosophie*; that is to say, the one and only substance has no *underlying identical nature*, which is only *manifested in different ways* in the attributes, but, on the contrary, its whole nature is contained and expressed in the different attributes, and the unity of these different expressions consists solely in the sameness or parallelism of the *order and connexion* of the modes of the several attributes: the unity of substance or *Natura* consists in this, that a single *Weltgesetz* or order prevails throughout all the infinitely many attributes.

Now there is one obvious merit of this interpretation: it gets rid of a contradiction in the language used by the commentators about the substance and attributes of the *Ethics* which cannot but strike us as soon as our attention is called to it. The commentators have to say that the substance is one and the same, that the attributes are entirely different from each other, and yet that the attributes constitute the essence of the substance. How one and the same substance can have infinitely many different essences is a puzzle indeed. The trouble goes back to Spinoza himself. In the scholium to II, 7 his language parades the contradiction before our eyes: *substantia cogitans et substantia extensa una eademque est substantia, quae jam sub hoc jam sub illo attributo comprehenditur*. Even if this statement is not to be taken as asserting that two substances are one and the same substance, it does at any rate assert that the substance which cogitates is one and the same substance as that which is extended, although he has said in the immediately preceding proposition that the attributes are wholly distinct, while by definition, as we know, *each* of them *constitutes* the essence of substance. Wherein can the *identity* of the *substantia cogitans* and the *substantia extensa* consist? Not in an identity of *essence*, for the two essences are wholly distinct. In what, then? Further on in the scholium the identity is apparently asserted to consist (as Robinson maintains it does) in the *ordo* or *connexio causarum*.

When the commentators follow, as it is only natural they should do, the emphatic language used at the beginning of the scholium, they are involved in the same inconsistencies and straining of language. *E.g.*, Pollock (ed. 2, p. 152) says: "If we think of Spinoza's Substance as distinct from and underlying the Attributes . . . we shall certainly go wrong." But next he says, "Substance is indeed manifested in the Attributes"; only, however, to retract the word 'manifested' by adding that "The manifestations are themselves the reality". Again, he suggests 'aspect' as the least unsatisfactory description of an attribute, whereas one would think that that word suggests the very ideas he wants to reject, *viz.*, that the distinction between the attributes is superficial, due to the spectators' point of view, and that there is no real plurality in the substance itself. On page 156 he speaks of the attributes as expressing 'the very same reality', but as 'differing in kind', though repeating 'the same order and sequence'. Joachim (p. 25) says: "It is one and the same Reality which manifests both characters (*i.e.*, Thought and Extension)"—a phraseology which would naturally suggest

some distinction between the Reality and the 'characters' which it 'manifests'. But we are told later (pp. 66-67) that "The Attributes . . . are not consequences of God's nature—they *are* that nature: and each Attribute expresses the whole nature of God under some one of its ultimate characters". It is surely obvious to remark that, if the attributes *are* that nature and are *all equally* 'essential to Reality' 'necessary to its being' (p. 26), no *one* of them can express the *whole* nature of God or Reality.

I have thought it worth while to give these quotations in order to show into what straits the commentators are brought when they attempt to expound a combination of three inconsistent doctrines: (1) that the substance consists of the attributes, (2) that the substance is one, (3) that the attributes are many and all wholly different from each other. No ingenuity and no straining of language are equal to the task. The other interpretation, whatever criticism it may itself be open to, does not at any rate land us in a situation which is quite obviously hopeless.

I will take one more quotation, because it may be used to bring out a new point. On page 148 Joachim says: "an idea is at once identical with its 'ideatum', and absolutely distinct from it". How was it possible to make a statement that appears to be flatly contradictory? The explanation is, of course, that we are here concerned with two relations which are not being clearly distinguished either by Spinoza or by his expositor: (1) the cognitive relation of the idea to its object, (2) the existential relation of two modes in different attributes. The attribute of Thought has a quite exceptional function, *viz.*, that it 'knows'—and for Spinoza this really means 'reproduces' or 'copies'—the contents of the other attributes; it has thus a double status, it exists on its own account and it knows the other attributes. If we think of an inscription on stone being copied on paper, we can see at once how a statement like that above quoted, which seems on the face of it so absurd, becomes merely ambiguous, for the identity and the distinctness are not asserted in the same sense. The literary content of the copy and of the original inscription is the same, but the paper copy is a different entity from the stone original. Spinoza is taking advantage of this ambiguity when he says in the scholium: *modus extensionis et idea illius modi una eademque est res, sed duobus modis expressa*. The *modus extensionis* and the *idea* cannot both be the thing of which they are different expressions. But for the fact that we are dealing with idea and ideatum this would be more obvious,

and on Spinoza's view of idea and ideatum—viz., that they belong to different attributes—they should not be called one thing at all: existentially they are quite distinct.¹ The fact that one of the two known attributes has (on Spinoza's view) this double status helps, I think, to conceal the inconsistencies on which I have been commenting.

I think, then, that, notwithstanding our scholium, Robinson's interpretation of Spinoza's doctrine is the right one, or, at the least, that it gives the doctrine which Spinoza ought to have held—further reasons for thinking so will be given presently—but it seems to me that he does not fully bring out (perhaps he was not concerned to do so) the extent to which our whole view of Spinoza's metaphysics must be affected by this interpretation. He admits (p. 163) that Spinoza's earlier mode of statement is in many respects preferable to the later one, i.e., that there are advantages in speaking, not of a single substance, Deus, and its attributes, but of Natura and the *substantiae* of which it consists. But I think we must go far beyond this and say that the later mode of statement is quite inconsistent and misleading. It is evident that if, as I, 10 says, an attribute *per se concipi debet*, then the so-called attribute is a substance, for substance is defined as that which *per se concipitur*. The definition of substance also says that substance is that which *in se est*; but this must apply to attribute also, for if the attribute were *in alio* it would be a mode and could not be conceived *per se*. In the scholium to I, 10 Spinoza asserts the exact contrary, viz., that we cannot conclude that, because two attributes are conceived as *realiter distincta* (i.e., conceived without any reference to each other), they are therefore two different substances. But his argument really begs the question. *Id enim est de natura substantiae*, he says, *ut unumquodque ejus attributorum per se concipiatur*. No doubt that is so, if a substance can have more than one attribute or essence.² But the question at issue is precisely whether the supposition that one substance can have two (or more) attributes is not self-contradictory, since it virtually asserts that one substance can be two (or more) substances. To say that

¹ If we were speaking, not of idea and ideatum, but of mind and body, a further confusion would be apt to come in. Mind and body are spoken of as one being, in the sense that they make up one being; but here again Spinoza has strictly no right to use that language.

² No wonder that de Vries objected that this had not been proved (Ep. 26 in Bruder II—VV 8). The proofs which Spinoza gives in his reply, using the vaguer word *ens* instead of *substantia*, seem to beg the question as much as ever, if he means to distinguish *substantia* from *attributum*; but a little later he says the two words denote the same thing.

Natura contains, or consists of, infinitely many wholly different substances might (provisionally) pass muster, but to say that the one substance, Deus, has infinitely many totally different essences is to say what is incomprehensible. But in any case, whether we speak of Natura or Deus or Substantia, the same problem emerges, *viz.*, Wherein does the unity of this entity consist, seeing that the entity itself is said to consist of infinitely many wholly different substances or attributes?

Several of Spinoza's correspondents (*e.g.*, Oldenburg and Tschirnhaus) pointed out to him that the totally different substances or attributes become so many different worlds, which have no connexion with each other. Oldenburg and Tschirnhaus, at any rate, would hardly get much satisfaction from such answers as they received. Spinoza himself had already stated the difficulty in a note in the *Short Treatise* (KV, I, 2—p. 26, n. 1 in the Suppl. to Bruder's ed.): If there were different substances, *quae non ad unicum quoddam ens referrentur*, then the kind of unity which we see, *e.g.*, of mind and body in man, would be impossible, since *cogitatio* and *extensio* as different substances have no *communio inter se*. But what is the *unicum ens*? It is here postulated rather than explained. And what could it be, if the substances in Natura are all different and have no *communio inter se*? Natura lapses into a mere aggregate. Later critics, of course, have found the same difficulty in seeing how the unity of Deus is to be reconciled with the infinite plurality of attributes totally different from each other. Joachim, *e.g.*, says (p. 104): "The unity of Substance which seemed so absolute . . . resolves itself into a mere 'togetherness' of an infinite multiplicity".¹ "Die Einheit der Substanz angesichts der Bestimmungen über die Attribute", says Camerer (p. 9), "bleibt ein unvollziehbarer Gedanke".

Now Robinson thinks that on his interpretation he escapes this difficulty. After quoting a number of statements about the difficulty similar to those I have given he says the difficulty is "nur ein Scheinproblem". The unity of Spinoza's Absolute is "keine gleichartige Einheit, sondern Einheit des Ungleichartigen" (p. 286). But of course it is just this 'Einheit des

¹ In the next sentence he says: "The Reality falls apart into a substratum without character, and characters which have no principle of coherence in a substratum." This introduction of a 'substratum' is inconsistent with what was quoted before from pp. 66-67, and shows how necessary it is to keep to one version of Spinoza's doctrine. The 'principle of coherence' might lie in the depths of the 'substratum', and Spinoza could fall back on the plea of our ignorance.

Ungleichartigen' that is the problem. He goes on: "Dass die verschiedenen Attribute, aus denen Gott besteht, keine separate Welten bilden, offenbart sich lediglich durch das Walten in ihnen allen eines und desselben Weltgesetzes". The unity consists solely in the singleness and sameness of the *ordo sive connexio causarum*. Now whether the sameness of the *connexio causarum* in totally heterogeneous attributes is really more intelligible than a more substantive kind of unity I need not inquire. For the point I am at present concerned with is that this interpretation makes the stability of Spinoza's metaphysical system depend wholly on II, 7, and the question becomes all-important, whether this foundation is secure. Has Spinoza in this proposition proved what is required by the demands of his theory? It seems to me that he has not.

In the first place, he has certainly not proved that the proposition can be generalized so as to assert that the same *ordo* prevails throughout *all* the attributes. In the proposition itself he does not even assert a thoroughgoing parallelism of this sort: he asserts only a parallelism of *ideae* and *res*. The scholium extends the parallelism to all the attributes, but in a rather casual way and without attempting a proof, which indeed it would be rather difficult to give since all the attributes but the two he has already referred to are unknown. Joachim says, (p. 126, n. 3): "In ii, 7 Spinoza is thinking primarily of Extension and Thought; but of course the doctrine holds of all the Attributes". Why 'of course'? That Spinoza means the doctrine to apply to all the attributes I do not doubt, but that the doctrine 'holds' of them all is totally unproved and totally incapable of proof. Let us make the utmost concession to Spinoza which we are entitled to make. If we accept his *a priori* assertion in II, 1 and 3 that the *intellectus infinitus* contains ideas of the whole contents of *Natura*, then there will be a parallelism to this extent, that to each of the attributes there will correspond a part of, or set of ideas in, *Cogitatio*. Thus, if we symbolize Extension by E and our part of *Cogitatio* by C_e, we can symbolize an unknown attribute by X and its part of *Cogitatio* by C_x. The attributes other than *Cogitatio* and the parts of *Cogitatio* will then 'run in pairs', as Caird puts it (p. 156), with a part of *Cogitatio* as one member of every pair. E will be parallel to C_e and X to C_x. But this state of things has not the least tendency to prove that E and X will be parallel. The fact is that the case of *Cogitatio* is a quite special case and we cannot generalize from its relation to the other attributes to the relation of these other attributes *inter se*. The special

character is that it has no independent content of its own. Its ideas or knowledges only repeat *objective* what exists in the other attributes *formaliter*. Consequently a correspondence between *Cogitatio* and the other attributes is implied in the very character assigned to *Cogitatio*. But there is no reason to suppose that any comparable relation holds between the other attributes. The presumption is surely rather against it. A simple illustration will bring out the point. Suppose there were English translations of the whole of French literature and again of the whole of German literature, there would be a correspondence between each literature and its translation, but there need not be any between the two literatures. And it will not do *now* (i.e., on the interpretation we have adopted) to fall back on Spinoza's assertion that all the attributes express the same substance, for we must then ask wherein this sameness consists, and if the answer is, In the sameness of the *ordo*, we are going round in a circle.

Thus, if the unity of *Natura* consists in the sameness of the *ordo* there is no proof for it and a certain presumption against it. And it should be observed that the same kind of difficulty will be repeated within the attribute of *Cogitatio*, whose parts will have no more connexion with each other than the corresponding attributes have.

The only way to save the situation would be to abandon the doctrine of the infinitely many attributes. But it may be surmised that Spinoza would have been anything but willing to do so, and his expositor seems to be of that mind also, for he calls the doctrine 'eine Grundsäule des spinozistischen Monismus' (p. 112). An infinite pluralism a 'Grundsäule' of monism! How can that be? Because "in diesem Pluralismus findete der (cartesianische) Dualismus seine Überwindung, indem die Grundverschiedenheit des Denkens und der Ausdehnung nur zum Spezialfall der unendlich mannigfaltigen Verschiedenheit wird, die innerhalb des absolut Unendlichen statt hat". But what we found was that the relation between *Cogitatio* and *Extensio* is a 'Spezialfall', not in the sense that it is only a special case of a relation that holds between any two attributes indifferently, but in the sense that it holds *only* between *Cogitatio* (or parts of it) and the other attributes, so that, instead of having overcome the Cartesian dualism, the doctrine of the infinitely many attributes merely repeats that dualism *ad infinitum* ¹

¹ We must therefore agree with Lotze when he says (deutsche Philosophie seit Kant, Diktate, p. 9): Die Sonderbarkeit, dass zwei ausdrücklich für unvergleichbar anerkannte Attribute in dem Wesen der absoluten

When we next consider the proof of the proposition, we may well complain (with Tschirnhaus) of Spinoza's brevity. He simply says: *Patet ex ax. 4, part. 1. Nam cujuscumque causati idea a cognitione causae, cujus est effectus, dependet.* The axiom itself says: *Effectus cognitio a cognitione causae dependet et eandem involvit*; and Spinoza quotes the axiom in his reply to Tschirnhaus (Bruder, Suppl. p. 317=VV 72) in the form: *Effectus cognitio sive idea a cognitione sive idea causae pendet.*

From this meagre material—the variations of form can hardly have any significance—it is very difficult to infer Spinoza's meaning with any certainty; and what adds greatly to our difficulty is the fact that Spinoza himself seems to see none. The natural meaning of the axiom is either (a) that when we know B as an effect (of A) we must know its cause (A)—a proposition which is not merely axiomatic but tautological—or (b) that in order to know B adequately we must see it as an effect, i.e., see how it was produced by its cause A. With (b) we may compare a statement in *Int. Em.* (Bruder II, p. 36, § 92): *revera cognitio effectus nihil aliud est quam perfectiorem causae cognitionem acquirere.* But neither of the meanings seems to suit II, 7, for that proposition applies to ideas in general, and we cannot say that all ideas are ideas of things as effects, nor again that in the case of all things that we know we have an insight into the cause of their production. In the axiom as quoted in the letter, if it stood alone, the addition of *sive idea* to *cognitio* might suggest that the axiom means that the idea of B—since B is an effect of A—must depend upon the idea of A in the same way as B depends upon A. From that statement the proposition would certainly follow at once, but the statement would hardly be axiomatic in the way in which (a) and (b) are; it really involves propositions that are proved in the *Ethics*, as will appear immediately.

But the meaning of the so-called demonstration can hardly be anything very profound or obscure in itself, since Spinoza himself regards the proposition as practically self-evident. The best I am able to do in the way of interpretation is the following: We know from I, 28 that every finite mode is determined by another, and that other by a third, and so on; and we have just been reminded in II, 5 and 6 that the causal series within each attribute is self-contained. Let ABCD be a causal series in the attribute of *Extensio*, and $\alpha\beta\gamma\delta$ a causal series in the attribute

Substanz vereinigt sein sollen, auf deren Einheit das grösste Gewicht gelegt wird, verdeckt Spinoza nur unvollkommen durch die Vermutung, die unendliche Substanz habe nicht nur diese zwei, sondern unzählige positive Attribute, von denen nur diese beiden uns bekannt seien.

of *Cogitatio*, and let $\alpha\beta\gamma\delta$ be the ideas or knowledges of ABCD: then the causal order of $\alpha\beta\gamma\delta$ must reflect, or be identical with that of ABCD, otherwise $\alpha\beta\gamma\delta$ would not be the ideas or knowledges of ABCD. In other words, the proposition is simply the axiom *Idea vera debet cum suo ideato convenire* (I ax. 6) applied to the causal order. How far $\alpha\beta\gamma\delta$ would contain an insight into the causal relations of ABCD would depend upon the degree of adequacy of the ideas. To such an interpretation, however, it may be objected, that Spinoza does not refer to the propositions and axiom here quoted, whereas he usually seems rather anxious to drag in all the propositions involved in a demonstration. The interpretation would in fact involve that Spinoza is reading into axiom 4 of I far more than it originally meant.

In view of the uncertainty as to Spinoza's meaning I will not deal further with the proof itself, but will rather go on to say something about the assumptions underlying the proposition. In doing so I shall have to refer to questions which I have already touched on, but at this stage in Spinoza's argument they become more pressing. If I have also to refer to questions that are familiar in the history of philosophy, that can hardly be avoided.

The proposition assumes, first, that there is an *idea* for every *res*, and conversely. This assumption may be taken as guaranteed by II, 1 S. and 3. Second, the examples in the scholium imply that the only case actually before us is that in which the *res* are modes of Extension, and the *ideae* are the ideas of these modes. This assumption may be taken as guaranteed by II, 1 and 2 taken along with ax. 5. In the discussion of the early propositions of II, Spinoza (and his reader) may appear to be regarding the two known attributes from a superior or neutral point of view, contemplating both attributes equally, and affirming the correspondence between them. But strictly this is not of course the case: the thinking of the philosopher falls within the attribute of *Cogitatio*. We were told long ago (I, 10) that each attribute *per se concipi debet*; from which it follows that two attributes (like the hypothetical two substances of I, 2) *nihil inter se commune habent*. But it has now been further impressed upon us in II, 5 that the *Res Cogitans* produces the ideas which are its modes solely by its own action, and without any action upon it by the *Res Extensa*. It is at the same time assumed that the ideas know the corresponding modes of Extension; for in II, 5 Spinoza uses the expressions *ideata*, *res perceptae*, *ideae objectum*, and in II, 7 the *ideae* are obviously meant to be the *ideae* of which the *res* are the *ideata*. But surely we must now

insist on some justification for this assumption and the use of these expressions. For, if we state the bare existential facts of II, 5 and 7, we must say that there is a self-contained causal series of modes of *Cogitatio* and a self-contained causal series of modes of *Extensio*, and that the *ordo* of the two series is the same. But we surely want some explanation of the *additional* relation between the two series, that the modes of *Cogitatio* know the modes of *Extensio*. In the case of attribute X and Extension there would be no such relation. Are we not, in fact, in danger of going round in a circle or involving ourselves in a contradiction,¹ since the correspondence of the two series seems to depend on the cognitive relation between them? We surely at least require some explanation of *how* the cognitive relation is *possible*, when the two attributes are absolutely disparate and independent.

The Spinozist may say the answer is obvious: it is simply the nature of an idea to know its ideatum; for Spinoza it is an axiom that a true idea *debet cum suo ideato convenire*. As to the first statement our reply must be, that it is precisely this nature or property of an idea whose possibility we find it difficult, *on Spinoza's view*, to understand, since the idea belongs to one attribute and the ideatum to another. As for the axiom, its natural meaning is, that an idea must agree with its ideatum *in order to be true*, and this naturally implies that the truth or falsity of the idea can be tested or verified by comparing the ideatum as ideated in the idea with the ideatum known in some further way, as when a person A, who has been asked whether B is in, says, No, I don't think so, but I'll go and see.

The Spinozist may say, This way of taking the axiom won't do; for Spinoza rejects the notion of an external criterion; according to him, the truth or adequacy of an idea is a property internal to it, as def. 4 of II clearly indicates. True, we may reply, but this only makes our difficulty the more obvious. We ask now, How is it possible that an idea or *essentia objectiva*, no matter what properties it may have in itself, can reveal, or assure us of, the existence of an *essentia formalis in another attribute*?

It is worth while to return for a moment to the passage in the *Int. Em.* quoted in § 2, for our difficulty comes up there in the immediate sequel, and we see Spinoza wavering (whether

¹ A circle, if we use the cognitive relation to establish the correspondence and then the correspondence to explain the cognitive relation; a contradiction, if we affirm a cognitive relation between things that are *wholly independent* of each other.

he realized it or not) between two quite different views of an idea. In the passage quoted we were told that the idea is an *essentia objectiva et in se quid reale*. But a little later we are told that *certitudo nihil est praeter ipsam essentiam objectivam; id est, modus quo sentimus esse formale est ipsa certitudo*. Now surely *certitudo* cannot at once be a mere manner of perceiving the *esse formale* itself and also an *essentia objectiva* which is *in se quid reale*. What Spinoza no doubt means to say is that in the case of a true idea the *essentia objectiva* brings with it an assurance of knowing the *esse formale*. But our difficulty is precisely to understand how it is able to do this, when it has no access to or communion with the *esse formale*, which exists as a mode of another attribute.

Now in the early propositions of II the conception of the idea or *essentia objectiva* as *in se quid reale* has been greatly strengthened. The *essentia objectiva* can hardly now be regarded even for a moment as a mere manner of perceiving. It is a mode of an attribute, a particular thing, an *esse formale* which is the effect of a second *esse formale* and presumably the cause of a third. But if the existence of an idea is wholly confined to the attribute of *Cogitatio*, and the idea is at the same time a knowledge of an object, then the immediate object of that knowledge must also be contained in *Cogitatio*—in other words, the *essentia objectiva* is not a manner of perceiving, but an object perceived, the immediate object of the idea as a knowing,¹ and this immediate or immanent object somehow carries with it a belief or assurance of the existence of a transcendent thing that is a mode in the attribute of Extension.

The Spinozist may say, You are misrepresenting Spinoza's doctrine here, and begging the question against him; his doctrine is that the idea *exists* in the attribute of *Cogitatio* but *knows* a mode of Extension. There are two difficulties in this answer. (1) The *essentia objectiva* is a particular thing, which has a content of its own; we can see how this content should correspond to or copy the content of the *esse formale*, but we

¹ That existentially the idea is one thing and the ideatum another, and also that the *essentia objectiva* is the immediate or internal object of the idea, is clearly implied in II, 5. For there Sp. asserts that every idea is caused by the agency of the *Res Cogitans*, i.e., (as II, 9 says), by another idea, and he at the same time denies that the idea is caused by its ideatum. Now, if the *ideatum* were really the internal object of the idea it would be meaningless to suggest or to deny that it is or could be the cause of the idea. Some modern psychologists are guilty of such a gross confusion, but we need not charge Spinoza with it.

cannot see how it can be said to *know the esse formale*.¹ (2) We cannot see how an idea should know immediately what exists in a wholly separate world which has no communion with that in which the idea exists; such knowledge would be miraculous, and is Spinoza of all people to ask us to accept a miracle?

Let us take it, then, that Spinoza's doctrine must be stated in the form that the *essentia objectiva* is the immediate object of knowledge and somehow carries with it a belief or assurance of the extra-mental existence of an extended thing, and let us ask once more how this is possible. Obviously the *essentiae objectivae* do not come with letters of introduction explaining that they are the *essentiae objectivae* of extended things. The *essentiae objectivae* must somehow reveal in themselves the character and independent reality of the extended things of which they give us the knowledge. How can they reveal the extended character of extended things? Only, we must answer, by being themselves extended. How can they reveal the independent reality of the extended things? Only, we must answer, by themselves behaving as if they were independent things. In other words, we can explain the knowledge of extended things only by transporting them in effect into the ideas and enabling them to be known directly, and, if this is so, the assertion on their behalf of an extra existence over and above their known existence becomes unmeaning. When the extended things are known by us as existing, it is the extended things themselves that are the immediate object of knowledge, not mere copies of them. We are brought, in short, to recognize that Spinoza's absolute separation of the two attributes, of knowledge and reality, is untrue and makes knowledge impossible. If knowledge is to be possible, to have indeed any meaning, there must be some sort of direct apprehension of reality from the very beginning, *e.g.*, we know extended things by directly perceiving them.

How did Spinoza get himself into the impossible position in which we have found him to be? Because he accepted Descartes' dualism of Thought and Extension in an even more rigid way than Descartes himself had asserted it, and then had to reconcile it with his own metaphysical-religious belief in the unity of *Natura* or *Deus*. Descartes, starting in a more psychological way from the *Cogito*, felt the difficulty of understanding how a knowledge of the extended world was possible, and did his best by rather roundabout methods to solve it. He started from the

¹ *I.e.*, to know that the copy is a copy, or to be aware of itself as being a copy.

standpoint of the Erkenntnistheoretiker; but Spinoza was primarily the metaphysician, and, accepting the dualism of Thought and Extension apparently without difficulty, and having knowledge before him as a fact, he had to find some metaphysical way of combining the dualism and the fact. His way of doing so was to assert an existential *correspondence* between idea and thing, and at the same time to substitute the notion of the *adequacy* of an idea for the ordinary notion of its truth. But the significance of the substitution is partly concealed by the assertion of the correspondence. On Spinoza's as well as on the ordinary view the idea agrees with its ideatum, but on the ordinary view, interpreted as I have suggested it should be, the agreement is *seen* to hold in virtue of an actual comparison made either by the person himself, or else by some one whose knowledge is fuller than his own, as Mr. Cargill's ideas about distances in Palestine were corrected by Touchwood who had been there. On Spinoza's view it is impossible that the agreement should be *seen*; it is metaphysically *inferred* from the adequacy of the idea (its truth in Spinoza's sense) on the principle that *id quod in intellectu objective continetur debet necessario in natura dari* (I, 30)—a principle which simply inverts the ordinary meaning of the axiom that *idea vera debet convenire cum suo ideato*.

§ 5

Spinoza, as I have already remarked, seems to have had a boundless confidence in *a priori* reasoning, the obvious example being his assertion of an infinity of attributes when experience shows us only two. In this case his assertion is of purely speculative interest. For, since the attributes other than the experienced two are unknown to us, and unknowable by us, and since all the attributes are quite independent of each other, it is wholly immaterial, so far as our experience is concerned, whether the alleged but not experienced attributes do or do not exist. If they do exist, they might as well not exist so far as we are concerned, for their existence can make no difference to our experience. But when Spinoza comes to apply his *a priori* reasonings within the field of experience itself the case is very different, for his reasonings may then conflict with experience, and yet his confidence in them be so great as apparently to blind him to the most evident facts. Our difficulty then is to explain how this was psychologically possible. The only explanation would seem to lie in some serious confusion of thought on his part, and he has accordingly been charged with it. This charge, I need hardly

say, is one not to be brought lightly against a great philosopher, and, if there was the least possibility that the charge was due to a wrong interpretation of Spinoza's view, we should be bound to go upon that assumption and to try to discover where our error lay. But when he lays down a proposition in terms which seem to admit of no interpretation but one, we must simply accept that interpretation and try then to discover the nature of Spinoza's own error.

Such a case presents itself in II, 13. Spinoza there says, in terms which seem to admit of no dubiety, that the *object* of the mind's knowledge is the body, *and nothing else than the body*.¹ * It is, of course, the last part of this assertion that occasions the difficulty. That in all (or nearly all) conscious states there is some awareness of the body, however vague, is true enough, but that there is no awareness of anything else is manifestly not true—it is contradicted by Spinoza's own statements, e.g., in 16 C 1 (where he says that the human mind perceives *plurimorum corporum naturam una cum sui corporis natura*),² and in 17 (where he says that, when the body is affected by an external body, the mind *idem corpus externum ut actu existens vel ut sibi praesens contemplabitur*). How, then, could he assert the *et nihil aliud* of 13? Again, if the mind's knowledge of the body is necessarily a knowledge of it as *actu existens*, i.e., if the mind's object is always an actually or presently existing thing, this would seem to exclude memory, which may be of something that no longer exists at all and is certainly of things that do not now exist in their past state; yet Spinoza, of course, elsewhere recognizes memory as a fact.

¹ Cf. the opening sentence of 19: *mens humana est ipsa idea sive cognitio corporis humani*.

² Robinson commenting on this corollary says: "Die Seelendefinition der Ethik will nicht besagen (auch eine derartige Missdeutung ist in der Spinozaliteratur zu treffen) dass der Mensch beständig an seinen Körper denkt, sondern bedeutet, dass der Mensch, indem er die Aussenwelt zu erkennen glaubt, in der Regel nur verworrene Ideen von den Zuständen seines eigenen, durch äussere Körper affizierten Körpers hat." This explanation of the definition seems to me to be explaining it away. Spinoza does not say that the object of the human mind is "as a rule" the body. And there is no warrant for the 'nur'. What Spinoza himself says in 16 C 2 is that our ideas of external bodies *magis nostri corporis constitutionem, quam corporum externorum naturam indicant*; and in 38 he says of the *omnibus corporibus communia* that the mind necessarily perceives them *adequately* when it *suum vel quodcumque externum corpus percipit*. The difficulty of the definition is precisely that Spinoza does not qualify his assertion in any way, but on the contrary adds the emphatic *et nihil aliud*. If, then, a man's body is the only object of his mind, surely he must think of it whenever he does think.

There must, then, it would seem, be some serious confusion in Spinoza's thought, if his assertion of our proposition is to be explained. Among the commentators Pollock frankly recognizes this, and charges Spinoza with using the one word idea to denote two quite distinct relations; others, *e.g.*, Caird and Joachim, are unwilling to admit that Spinoza could be guilty of such confusion, but their own explanations of what Spinoza means when he speaks of the mind as the idea of the body are far from clear. The gist of Pollock's criticism can be given in a couple of sentences. After remarking that the human mind is spoken of as the idea of the body he says: "Now a man can easily think of his own body, but he is not always doing so, and when he does his thought will not be accurate unless he has learnt something of physiology. And even if every human being were an accomplished physiologist, the constant relation of the mind as a whole to the body as a whole would still be something different from the relation of the knowing to the known" (ed. 2, p. 124).¹ As regards the first sentence I think it is preferable to emphasize, not so much the negative statement that we are not always thinking of our body, as the positive one, that, unless something is wrong with the body, we do and must think a great deal more about other things. But it seems to me that Pollock's criticism is substantially right. As he is content, however, to state his criticism quite briefly, it may be worth while to give a rather fuller statement, and also to preface it by a brief statement of what seems the true view of the distinct relations in which the mind stands respectively to its objects, and to its body and external bodies considered not as objects of, but as conditions of, perception.

When the mind, or knower, K, perceives an object in the external world, *e.g.*, the sun, two relations between the mind and the thing (the sun) are involved: (1) the cognitive relation between the mind as knowing and the thing as object, (2) an existential relation between the thing and the embodied mind as existents. The latter relation needs a little explanation. The sun as a cause sets up light waves which travel to the earth, affect the body or eye, and so initiate a physiological process which causes a brain change, in virtue of which, as a condition,

¹ Caird (pp. 197-199) comments on these sentences, and, unless his reader had the sentences actually before him, the comments would almost certainly suggest that Pollock had asserted that Spinoza was logically bound to maintain that "every human being must be an accomplished physiologist." The suggestion would, of course, be quite false: Pollock says 'even if'. I will refer to Caird's defence of Spinoza later.

perception of the sun takes place. The series of events that starts from the sun and has its physical (or physiological) termination in the brain is in its earlier stages a causal series, but in its last stage, *viz.*, that in which perception takes place, and in which the brain functions as the organ or instrument of the mind, we had better describe it by another adjective such as 'instrumental,' for the relation of mind to body or brain is so intimate that the notion of causal action seems inappropriate. I propose to call the cognitive relation the C-relation, and the existential or causal-instrumental process the E-process. Now it is all-important to see and to keep in mind that the relation and the process are quite distinct from each other. For, in the first place, the E-process is always prior in time. In our example of the sun the interval between the start and the termination of the process is about eight minutes, since light takes that time to travel from the sun to the earth, and it is only when the process reaches its termination that perception takes place. The sun as thing is both object and cause, but its causal action is always 8 minutes ahead of its status as visible object; if the transmission of light were instantaneous the sun in the morning would be a visible object 8 minutes earlier. In the case of things close at hand the time interval is practically negligible, but it is theoretically important, because, if we keep it in mind, we shall be prevented from confusing object with cause and from supposing that the E-process intervenes between the *object* and the mind. If anything intervenes between the mind and its object, *i.e.*, if perception involves a process, the process must be psychical not physical. In the second place, the E-process is an inferred, not a perceived process, and more especially so as regards K himself. The point is not merely that much of it is not, and cannot, be perceived *in point of fact*, *e.g.*, the brain processes, but that *theoretically* even if they could be perceived, and in some magical way made perceptible to K himself, yet whatever brain processes he perceived they could never be the self-same brain processes as those which conditioned his perception, since there would always be the time-interval between eye and brain-change: object and cause or stimulus could never be absolutely coincident. In actual fact, of course, K does not perceive the E-process at all: it belongs to science and not to the world of ordinary perception.

If we ask ourselves the question which Spinoza answers in his way in II, 13, *viz.*, What is the object of K's knowledge (or external perception) as a whole?—we cannot possibly answer it as Spinoza does. It is a plain fact that we perceive much more

than the body. *E.g.*, if I turn and face the window of the room in which I am writing, I see not only my own hand and arm, but part of the room and its furniture, part of a garden, houses in the village, and a range of hills. What K knows or perceives is not his body only, but the whole field of objects that come within his knowledge or perception, among which his own body is only one, though for him a constant and very important one. But a difficulty may suggest itself here—it no doubt influenced Spinoza. How is it that, if perception is immediately conditioned by brain processes which are wholly within the body, we are nevertheless able to apprehend things that exist altogether apart from the body and only act upon it externally? It may be for us impossible to answer this question. It is conceivable that the brain processes might have had for their concomitants on the mental side merely sensations and feelings that would have indicated nothing but the state of the body itself: the mind of animals, or at any rate of the lower grades of animals, is often supposed to be of that type. But such is not the case as regards the human mind. Human brain processes are the condition of a knowledge, not only of the body, but of things that exist altogether apart from the body; while of the brain processes themselves nothing is known except by science, and then only in a vague and inferential way. It would be a serious blunder, then, to use the scientific doctrine that perception is conditioned by brain processes to throw doubt upon the directness or value of our knowledge of external things. The E-process is itself a fact of *knowledge* and presupposes on the part of the man of science that very apprehension of external things which it would have been used to throw doubt upon.

Consider now Spinoza's doctrine in relation to the foregoing statement. He asserts, of course, a cognitive relation between the mind and its object; he denies an instrumental relation of body to mind, for they belong to different attributes which have no *communio inter se*; but he asserts a correspondence between events in the two attributes, an identity of the *connexio causarum*. But now II, 13 throws all our previous ideas on these points into confusion. If we follow the epistemological doctrine of the *Int. Em.*, the cognitive relation is the relation of the *essentiae objectivae* in the mind to their *essentiae formales*, and when these latter are extended things it seems obvious to suggest that the knowledge is at the same time a correspondence between ideas and things, whether the correspondence is to be explained on the ordinary view that the mind experiences and apprehends the things, or on Spinoza's metaphysical theory that the ideas and

the things are parallel events in wholly separate attributes. The so-called correspondence does in fact hold between ideas and 'objects' in the strict sense of the latter term as meaning things considered *so far as known only*; for then, as we have seen, the case is really one of identity, and not of correspondence. But it does not hold between things *ἀπλῶς* and ideas, for we can know that our ideas of the things are incomplete. Still the cognitive relation and the relation of correspondence can, on Spinoza's view of ideas, be plausibly identified, especially if we are at liberty to assume that the incompleteness of *our* ideas is somehow compensated in the *intellectus infinitus*. And it will be remembered that on this general view Spinoza, strictly speaking, should argue from ideas to things by means of the *a priori* assumption *id quod in intellectu objective continetur, debet necessario in natura dari*. But now we are told that the mind's one and only object is the body. We are now to regard cognition and correspondence from a quite different point of view. We are to start, as the proof of II, 13 shows, from the empirical fact stated in axiom 4: *Nos corpus quoddam multis modis affici sentimus*—a fact which, as so stated, seems hardly consistent with the total independence of the attributes. We are to treat the correspondence, not as a general one between ideas and the things which are their objects, but as a much more special one between bodily states and their psychical correlates. We are to limit the object of mind accordingly and say it is the body only. And we are in effect to surrender the doctrine of the independence of the attributes by treating the mind as if it were really determined, in respect both of cognition and correspondence, by the body.

Camerer (p. 77) says of II, 13: "Dass die Ideen von den Affectionen des Körpers im menschlichen Geiste sind, wird hier mit der Erfahrungsthatſache bewiesen, dass wir die Empfindung von jenen Affectionen haben, welche ſelbſtverſtändlich eine Empfindung des eigenen Körpers iſt". I think that Camerer here gives us the right clue to Spinoza's reason for asserting the proposition. External bodies can make us aware of their existence only by affecting our own body, and it is these affections of our own body which alone *we* experience; consequently, it would seem, our own body is the mind's only object. The fallacy of this reasoning lies in the ambiguity of the expression 'affections of our own body', Spinoza's *ideae affectionum corporis*, Camerer's 'Empfindung des eigenen Körpers'. No one would wish to dispute that *affectiones* occurring in any other body can make no difference to us; it is only when

affectiones are excited in our own body that we experience anything. But this is not to say that what we experience, the object of our experience, is these *affectiones* themselves. The *ideae affectionum* are ideas which depend upon, or are conditioned by, the *affectiones*, but they need not be ideas which have these *affectiones* for their objects.¹ The *affectiones* upon which the ideas or perceptions *immediately* depend are in fact physiological processes, which the *body* may be said metaphorically to 'experience', but which *we*, strictly speaking, do not experience at all and which are objects only for the physiologist. Hence, although the *affectiones* are the *affectiones* of our own body, we must not conclude that the *ideae* corresponding to, or conditioned by, them have necessarily our own body for their object. When we perceive external bodies this is plainly not the case; and, when we are perceiving external bodies, we very often do not even think of our own body as being affected by them at all, though we may do so, *e.g.* when we are dazzled by a too bright light. The danger of confusion and fallacy is all the greater when a single word may be used, like Camerer's 'Empfindung' and our 'affection' above or 'sensation', to denote both process and object. Spinoza uses *affectiones* to denote the bodily processes or facts, and speaks of the *ideae affectionum*, but he fails apparently to see that the *ideae* which occur in the mind when

¹ There is an ambiguity here which should perhaps be noticed more particularly, in order to prevent misunderstanding. An *affectio* may be (α) a bodily fact of which we are aware, and so in the technical sense an 'object', or (β) a physiological process of which we are not aware at all; and our awareness of α is always conditioned by β . But there are cases of α in which the bodily fact is so vague, and so internal to the body, as it were, that the description of it as an object seems unnatural, and these vaguer experiences may tend to confuse the really clear distinction between α and β . Suppose a person is being taught to play the violin. The teacher may take his pupil's hand and place it in the correct position for bowing. Here the pupil sees his own hand and the teacher's hand equally as objects by means of the same visual β ; he has also the tactual experience of his hand being touched and moved, but in ordinary talk we should be less ready to describe this experience as experience of an object, yet of course the touch and movement are objects of awareness in a sense in which the β on which the awareness of them immediately depends is not. And we may have bodily experiences of a much vaguer kind, vague bodily pains and discomfort, which we can perhaps hardly localize at all. If the β process is disordered it may itself give rise to pains, *e.g.*, eye-strain may cause headaches, but such pains are not an awareness of the β process. Thus the distinction between an *affectio* of the type α , however vague the awareness may be, and an *affectio* of the type β , where there is no awareness whatsoever, remains absolute. The *imagines* of II, 17 S. belong, I take it, to type β .

the *affectiones* occur in the body need not have the *affectiones* or the body for their object. *Ideae affectionum* may mean either ideas which correspond to the *affectiones*, or ideas which are aware of or know the *affectiones*, but Spinoza apparently identifies the two meanings, *i.e.*, identifies correspondence and cognition, but now from a physiological rather than an epistemological point of view.

In 17 S. he says *corporis humani affectiones, quarum ideae corpora externa velut nobis praesentia repraesentant, rerum imagines vocabimus, tametsi rerum figuras non referunt: et quum mens hac ratione contemplatur corpora, eandem imaginari dicemus*. Here, it might seem at first sight, he is certainly distinguishing between the so-called '*imagines*' in the body and the objects of the *mentis imaginatio* which are *corpora externa*. But then he has in view in this scholium the case in which the external bodies are *not* actually present and are not being *really perceived*. So it is to be feared that he would find it even easier in this case to say that the mind is expressing in its ideas only something that occurs in the body; and it might indeed be suggested that it is in the light of this case that we should interpret the case of perception itself, so that we should thus regard II, 13 as asserting that the mind's object is the body in the sense that (where we should ordinarily say that the mind's object is external bodies) the mind is only expressing by means of ideas of external bodies *affectiones* which are occurring in its own body. But if Spinoza was thinking on these lines he would surely have stated 13 in a different way and made his meaning clear; and even then he would still be interpreting his correspondence in two ways, epistemological and physiological, without clearly recognizing that he was doing so. I think, then, that we must agree with Pollock that, when Spinoza speaks of the mind as *idea sive cognitio corporis*, he is confused and is using the word *idea* in a new and strange way.

Caird denies the confusion, and endeavours to defend Spinoza against Pollock, but unfortunately he makes much of the reference to physiology which is quite incidental in Pollock's criticism, and on the really important points merely repeats Spinoza's own confusion. Thus he asks, "What can be the special object of the idea which is a particular mode of thought if not the particular mode of extension which corresponds to it?" (p. 198). Let the idea be an idea (or perception) of the sun. Surely there can be only one answer to the question, What is the special object of that idea? What, then, does Caird mean by his vague phrase 'the particular mode of exten-

sion which corresponds to it'? He goes on to say, "Outside of itself, there is nothing for the individual mind to think, nothing that for it immediately exists, save the individual mode of extension which is the obverse, so to speak, of itself". By the obverse he means, of course, the body. Now the body *as organ* is intimately connected with the mind in a way that nothing else is, but the body *as object* is only one object among other objects, and there is no justification for saying that there is no other object 'for the individual mind to think', and no other thing that 'for the individual mind immediately exists'. The body is normally perceived in an environment of other bodies, and the individual mind may at a given moment be much more intent upon one of these bodies than upon its own body. Finally we are told that "In being the mental correlate of the body the mind *thinks* the body". What is meant by this obscure expression '*thinks* the body'? Joachim also uses this phraseology (p. 71): "God, in being the 'soul' of a thing, thinks the thing, whose soul his act of thought is". On the same page he says: "The intelligence of God is one and the same as its objects: it is the soul-side of them, and is thereby, for God, the reflection or apprehension of them". The first half of the sentence, as an exposition of Spinoza's view, is obviously expressed loosely; in the second half 'soul-side' suggests an existential part or concomitant, 'apprehension' should mean cognition, 'reflection' is somewhere between the two, an existential copy. Later (p. 125) we are told, in like manner but with special reference to the finite body and soul, that "Every body is an idea, and its ideal side is at once its 'soul' and the apprehension of its body". Strictly speaking, no body is an idea: Spinoza's own statement (II, 7 S.) is that the *res* is one and the same but the modes are *two* (and therefore not the same). And here, too, 'ideal side', 'soul', and 'apprehension of its body' are equated like the similar expressions above. It may seem pedantic to insist on such points, especially if the quoted sentences are read in their (unquoted) contexts, but I do so in order to justify the remark that expositions of Spinoza which merely repeat his own confusion and obscurity do nothing to answer criticism like Pollock's.

The general charges against Spinoza, then, in the part of II which I am now to examine in more detail are (1) that he confuses the cognitive relation with the existential correspondence asserted by him in II, 7 and now to be taken in the sense of a correspondence between mind and body, (2) that, in consequence of that confusion, he asserts the body to be the sole object of

the mind's knowledge, and (3) that, in spite of his denial of any *communio* between the attributes, his argument repeatedly suggests that he is really thinking of the mind as determined by the body, so that, not parallelism, but epiphenomenalism, would be the word to describe the real tendency of his thought.¹

¹ Robinson (pp. 273-274) puts this predominance of the extended world over thought rather quaintly. For Spinoza, he says, "die bloss gedachte Welt ist der wirklichen nicht ebenbürtig. Wenn die *realitas objectiva*, wenn das Attribut des Denkens sich so weit wie die äussere Realität . . . erstreckt, so ist doch die intramentale Realität nicht mit der extramentalen zu vergleichen, ihr spezifisches Gewicht ist sozusagen nicht gleich Eins, sondern zwischen Null und Eins zu setzen." Such a view is quite at variance with II 5, which insists that the *esse formale* of ideas depends solely upon the *Res Cogitans*, or attribute of *Cogitatio*, and does not involve the conception of any other attribute; the proposition is evidently intended to assert the complete equality of the attribute of *Cogitatio* with the other attributes.

(To be concluded.)

II.—LES ANTINOMIES KANTIENNES ET LA CLAVIS UNIVERSALIS D'ARTHUR COLLIER.

By H. J. DE VLEESCHAUWER.

L'UNE des grandes questions qui passionnèrent le néokantisme dans le dernier quart du siècle dernier fut incontestablement celle de savoir comment le criticisme s'était imposé sur le tard à l'esprit de Kant. En disant le criticisme, je ne désigne pas seulement par ce terme la *Kritik der reinen Vernunft*, mais bien la doctrine critique qui, comme on sait, était déjà présente en partie, dix ans avant la publication de la "seconde Bible de l'humanité", dans la *Dissertatio*. Les historiens prirent dans ce débat une part prépondérante. K. Fischer croyait que l'invention du problème critique était l'aboutissement logique des études kantienues au sujet de l'espace poursuivies avec l'assiduité que l'on sait. F. Paulsen en appelait au problème de la causalité, et W. Windelband s'en référait à la distinction spécifique entre l'entendement et la sensibilité, tandis que B. Erdmann avait la bonne fortune de révéler quelques faits nouveaux, qui rattachaient l'origine du criticisme à la découverte du problème des antinomies. Et c'était là aussi l'opinion de Vaihinger. En parfait parallélisme avec ces opinions distinctes, les mêmes auteurs invoquaient en outre les affinités historiques différentes dont Kant aurait subi l'influence. Fischer se refusait à envisager la moindre influence extérieure dans le revirement des conceptions de Kant au sujet de l'espace, et il concluait, en parfait hégélien, à une évolution interne, indépendante des contingences historiques parmi lesquelles la pensée était appelée à se mouvoir. La centralisation de la doctrine critique autour du problème causal obligeait Paulsen à mettre en lumière l'influence décisive exercée par la lecture assidue des oeuvres de D. Hume. Windelband avait de bonnes raisons pour croire que la toute récente édition des *Nouveaux Essais* de Leibniz, due aux soins de Raspe, imposait au futur auteur de la *Critique* l'abandon d'une distinction purement logique entre nos facultés de connaître. Quant à Erdmann et Vaihinger, ils ne se prononcent pas très clairement sur les attaches historiques qu'aurait pu avoir la doctrine des antinomies. En effet, l'ouvrage de Herz auquel Erdmann se réfère

dans cette discussion ne nous fournit aucun élément permettant de conjecturer l'origine probable de la doctrine antinomique. Il nous assure uniquement que la genèse du criticisme est intimement liée à la découverte du problème des antinomies.

J'ai retracé récemment l'évolution du problème critique chez Kant en me laissant guider par une méthode à la fois philosophique, philologique et historique,¹ et, tout en voulant mettre le lecteur en garde contre le caractère artificiel de ces essais antérieurs qui découpent arbitrairement, en tronçons séparés, un ensemble vécu de pensée nécessairement complexe et multiforme, j'ai fait appel, et cela avec une certaine prédilection, à l'idée des antinomies comme à un des principaux facteurs qui ont contribué à faire éclore la puissante doctrine critique.² L'endroit n'était pas propice pour entrer dans les petits détails de la question, mais je pense avoir suffisamment montré dans cet ouvrage, combien était loin de moi l'intention de suivre les *Kantphilologen* dans le découpage artificiel que je leur reprochais. Puisqu'ici je n'ai qu'à parler des antinomies et que je puis faire abstraction de tous les autres facteurs convergents, à la question de savoir si l'idée des antinomies a été vraiment à l'origine du criticisme, je suis contraint de répondre à la fois oui et non. En effet, la réponse dépend de la manière de comprendre la question elle-même.

La réponse doit être absolument négative si l'on veut faire dépendre le criticisme du problème des antinomies exclusivement : j'ai moi-même montré comment l'orientation critique que prend la pensée de Kant après vingt ans de d'approches incessantes, est dû vers 1769, au confluent de courants divers, parmi lesquels l'idée des antinomies a tenu peut-être le rôle de la goutte d'eau qui fait déborder la coupe.³ Le point auquel Kant était arrivé dans ses méditations sur le problème de la métaphysique, ses réflexions ininterrompues sur l'espace, sur la causalité, sur la nature de l'entendement, etc., tout cela réuni en faisceau dans cette vivante unité que constitue la pensée de Kant, a fait sortir celle-ci des sentiers battus jusqu'alors. D'autre part, la réponse à la question précitée doit être énergiquement affirmative, si l'on se borne à prétendre qu'après la lente démolition du wolfianisme, le problème des antinomies a ouvert tout-à-coup des horizons

¹ De Vleeschauwer, *La Déduction transcendantale dans l'Œuvre de Kant*, 3 vol. Anvers-Paris-La Haye, 1934-1937. Je cite cet ouvrage, dans la suite, de la manière suivante : *La Déduction*, avec indication du tome et de la page.

² De Vleeschauwer, *La Déduction*, I, pp. 148-153.

³ *Ibid.*, pp. 79-146.

nouveaux et projeté une vive lumière sur les insuffisances du passé. Après l'action dissolvante qu'exercent Newton, Hume et, en général, l'empirisme de la philosophie contemporaine, la découverte des antinomies allait rendre inévitable l'invention du problème critique lui-même.¹

Cette collaboration des antinomies n'est pas une fantaisie rétrospective de la part de l'historien. Elle est attestée par Kant même. Erdmann découvrit une *Reflexio* où Kant notait : "Wenn ich nur so viel erreiche, dass ich überzeuge, man müsse die Bearbeitung dieser Wissenschaft so lange aussetzen, bis man diesen Punkt ausgemacht hat, so hat diese Schrift ihren Zweck erreicht. Ich sahe anfänglich diesen Lehrbegriff wie in einer Dämmerung. Ich versuchte es ganzt ernstlich, Sätze zu beweisen und ihr Gegentheil, nicht um eine Zweifellehre zu errichten, sondern weil ich eine Illusion des Verstandes vermuthete, zu entdecken, worin sie stäke. Das Jahr 69 gab mir grosses Licht."² Au surplus, vers la fin de sa carrière, Kant croyait devoir protester contre une note que, dans un ouvrage sur la morale kantienne, Garve consacrait à l'origine du criticisme.³ La riposte de Kant est tellement claire qu'elle se passe de commentaire : "Beym durchblättern derselben bin ich auf die Note S. 339 gestossen : in Ansehung deren ich protestiren muss. — Nicht die Untersuchung vom Daseyn Gottes, der Unsterblichkeit, etc., ist der Punet gewesen vom dem ich ausgegangen bin, sondern die Antinomie der r.V. : 'Die Welt hat ein Anfang — : sie hat keinen Anfang etc. bis zur vierten : Es ist Freyheit im Menschen, — gegen den : es ist keine Freyheit, sondern alles ist in ihm Naturnotwendigkeit', diese war es welche mich aus dem dogmatischen Schlummer zuerst aufweckte und zur Critik der Vernunft selbst hintrieb, um das Scandal des scheinbaren Widerspruchs der Vernunft mit ihr selbst zu heben".⁴

Remarquons en passant que la lettre de Kant à Garve est peut-être trop précise en tant qu'elle situe déjà les quatre antinomies à l'époque qui nous occupe, alors qu'il n'est pas certain du tout que les antinomies dynamiques étaient arrêtées dans son esprit dès l'année 1769. Quoi qu'il en soit, ces deux déclarations personnelles de Kant projettent une vive lumière sur un autre texte des *Prolegomenes*, qui, par le fait même, peut constituer un

¹ De Vleeschauwer, *La Déduction*, I, pp. 149-150.

² *Ref.* 5037, *Kants Werke*, ed. Ak. t. XVIII, p. 69. Je cite les œuvres de Kant toujours d'après l'édition de l'Académie de Berlin.

³ Garve, *Abhandlung über die verschiedenen Prinzipie der Sittenlehre von Aristoteles bis auf unsere Zeit*, Berlin, 1792-1802.

⁴ A. Garve, 21 Septembre, 1798, Ak. XII, p. 255.

témoignage en faveur de la même thèse : " Dieses Product der reinen Vernunft in ihrem transcendenten Gebrauch (scil. Kosmologische Ideen) ist das merkwürdigste Phänomen derselben, welches auch unter allen am kräftigsten wirkt, die Philosophie aus ihrem dogmatischen Schlummer zu erwecken und sie zu dem schweren Geschäfte der Kritik der Vernunft zu bewegen ".¹ L'antinomie est par excellence le moyen propre à éveiller le philosophe de son sommeil dogmatique, et il est avéré que cet éveil coïncide avec l'invention du problème critique.²

Notre premier problème se résoud facilement. D'après les dires de Kant même, l'idée des antinomies a eu une part prépondérante dans la constitution de la doctrine critique. Surgit alors immédiatement un deuxième problème : l'idée même des antinomies, d'où est-elle venue à Kant en 1769 ? Ici nous entrons dans le domaine de la conjecture et il faut dire qu'en général les historiens de Kant qui reconnaissent la collaboration des antinomies n'ont guère poussé leur curiosité de ce côté-là. En effet, ni Erdmann, ni Sternberg qui le copie, ni Vaihinger, ni Maréchal, ni Adickes, ni M. Wundt n'ont répondu à cette seconde question. C'est que, malgré tout, un petit mystère continue à entourer le vrai rôle joué par l'antinomie à ce moment précis. Le premier signal du criticisme nous est donné dans la *Dissertatio*. Or cet ouvrage, loin de traiter *ex professo* des antinomies, ne les mentionne même pas d'une manière expresse, de sorte que l'on se voit bien obligé de douter quelque peu si, en réalité, leur rôle révélateur a réellement enthousiasmé Kant, lorsqu'il rédigeait son premier écrit critique.³ Ce qu'en dit Robinson ne peut être tenu pour concluant.⁴ Ensuite, les quatre antinomies se subdivisent dans la *Critique* en deux classes, une classe mathématique et une classe dynamique,⁵ et ces deux classes traitent de problèmes tout-à-fait distincts. L'une concerne l'espace, l'autre la liberté et Dieu. Si le problème tout entier conserve quelque rapport avec la période précritique, la découverte des antinomies ne concerne très probablement que la première classe, et ce ne pouvait être que bien plus tard que, sous l'effet de son esprit systématique par excellence, Kant a pu songer à élargir le domaine primitivement découvert pour aboutir aux quatre antinomies définitives. La tétrachotomie catégoriale ne pouvait sortir ses effets pour la bonne raison qu'elle n'existait pas encore.⁶

¹ *Prolegomena*, Ak. IV, p. 338.

² *Ibid.*, pp. 260-261.

³ De Vleeschauwer, *La Déduction*, I, 149 (et la note s'y rapportant).

⁴ Robinson, *Contributions*, etc., pp. 323-325. Voir à la p. 309, note 1, le titre complet de cet article.

⁵ *Kritik*, ed. Ak. III, p. 361.

⁶ De Vleeschauwer, *La Déduction*, I, p. 210 sq.

En outre, la *Dissertatio* est intéressante pour la doctrine de la sensibilité qu'elle expose pour la première fois dans ses allures critiques. Elle est, en fait, la première divulgation de l'idéalité transcendente de l'espace et du temps, et si Kant y fut amené par l'antinomie, c'est à la seule classe mathématique qu'on pourrait songer. La classe dynamique aurait logiquement conduit Kant à une conception de la raison tout autre que celle ajoutée par la *Dissertatio*, un peu hâtivement, à la conception de la sensibilité.

Admettons donc comme infiniment probable que la découverte du problème des antinomies se borna au cours de l'année 1769 à celle de l'espace. Et après cette nouvelle restriction du problème, posons-nous une première question : Kant, pouvait-il arriver aux antinomies mathématiques personnellement, c'est-à-dire sans apport de l'extérieur, grâce à ses propres méditations sur l'espace ? J'ai résumé ces méditations dans le travail déjà cité,¹ et pour ne pas reprendre cet exposé, disons simplement que de ces méditations devait résulter un conflit entre la conception relativiste à la manière de Leibniz et la conception substantialiste de Newton. Dans la première conception, l'espace est la perception obscure de l'ordre existant entre les choses grâce à leur coexistence, comme la causalité est la perception de l'ordre réalisé par leur succession. Dans la seconde conception, l'espace est un absolu. Pour Leibniz, la coexistence est la condition de l'espace ; pour Newton, l'espace est la condition de la coexistence. Dans le désir de faire droit à tous les textes sans exception, qui, dans la période précritique, se rapportent au problème de l'espace, j'ai été amené à conclure que Kant n'a fait sienne d'une manière exclusive aucune de ces deux conceptions. Il s'est arrêté à une conception intermédiaire assez instable, il est vrai : la relativité de l'espace comme l'ordre des substances d'une part, mais simultanément, d'autre part, ce n'est pas la coexistence pure, mais l'appareil des lois dynamiques de la matière (c'est-à-dire l'attraction) qui réalise cet ordre. Or cela revient assurément à reconnaître une certaine réalité physique à l'espace.² Nous retrouvons cette opinion moyenne dans tous les écrits précritiques jusqu'à la petite dissertation de 1768 sur la distinction des lieux dans l'espace. Dans ce volume de modestes dimensions, Kant se rapproche de la conception newtonienne. Il se convertit à l'espace absolu, condition de possibilité non seulement de l'espace physique, mais aussi de l'espace mathématique.³ Nous savons

¹ De Vleeschauwer, *La Dédution*, I, pp. 130-139.

² *Ibid.*, p. 133.

³ *Ibid.*, pp. 136-139.

aussi que cette conversion remonte, en partie du moins, à une influence d'Euler.¹

Si l'on ne veut pas substituer aux textes un sens caché ou des convictions latentes, on est obligé de conclure après une lecture attentive qu'ils sont incapables de nous montrer d'une manière suffisamment claire que la découverte des antinomies mathématiques devait se trouver nécessairement au bout de ces discussions épisodiques de l'espace. Et cependant, dès le début de sa carrière philosophique, Kant a posé une des futures antinomies. Ajoutons immédiatement, pour éviter tout malentendu, que Kant ne la nomme pas antinomie, qu'il n'y voit pas le problème spécial qu'il y rattachera plus tard, qu'il ne lui accorde pas non plus la grande portée épistémologique de la *Critique*, et que la solution qu'il lui donne ne présage aucunement celle de 1781. Il découvre simplement au fond du problème de l'espace des conséquences contradictoires, c'est tout. Voici à quoi reviennent ces textes.

Dans la *Monadologia physica*, il aperçoit que, dans la doctrine commune, le corps physique est composé de monades simples et par conséquent indivisibles,² alors que la même doctrine professe l'existence d'un espace, qui est le contenant de ces corps physiques, divisible à l'infini et par conséquent non composé de parties ou de monades simples.³ C'est la seconde antinomie, avec cette différence que la contradiction qui éclate entre la métaphysique et la géométrie se joue dans un et même système de pensée. Kant la réduit en disant que la métaphysique et la géométrie sont toutes les deux dans le vrai, vu que la division de l'espace n'entraîne pas nécessairement celle des parties.⁴ Dans la *Critique*, au contraire, thèse et antithèse sont taxées d'erreur : elles ne forment donc pas de vraies propositions contradictoires, puisqu'elles peuvent être fausses ensemble.⁵ Malgré la similitude, nous devons conclure qu'il n'est pas absolument démontré par là que Kant ait trouvé les antinomies par lui-même. Soyons cependant prudents. Que cela ne soit pas démontré ne veut pas dire nécessairement que la chose est impossible. L'examen de la doctrine précritique de l'espace ne nous fait donc pas sortir de notre indécision, et, à cause de cela, la recherche d'une origine

¹ De Vleeschauwer, *La Déduction*, I, p. 136, et la note.

² La preuve qu'en donne Kant est identique à celle d'un ouvrage de Keill intitulé : *Introductio ad veram Physicam*, 1702, 6e éd. 1741, pp. 28-29. Keill était un partisan de Newton. Cf. Adickes, *Kant als Naturforscher*, I, pp. 150-151.

³ De Vleeschauwer, *La Déduction*, I, pp. 132-133.

⁴ *Monadologia physica*, ed. Ak. I, p. 480.

⁵ *Kritik*, ed. Ak. III, pp. 338 sq.

étrangère à notre doctrine ne peut pas être tenue pour non fondée. Cette constatation justifie l'examen que nous allons faire d'une collaboration étrangère avancée par L. Robinson. Malheureusement, l'auteur l'a introduite d'une manière peu heureuse lorsqu'il écrit : " C'est donc déjà dans les années qui précèdent celle de 1769 que Kant s'est occupé de l'antinomie, quoi qu'il n'entrevît alors le concept de celle-ci que dans une sorte de crépuscule. Cela paraît d'ailleurs fort naturel, car, à cette époque, il ne possédait encore aucun moyen de dominer les antinomies. Il n'avait conçu ni la doctrine de l'idéalité du temps et de l'espace, ainsi que la distinction, qui en est la conséquence, entre le monde sensible et le monde intelligible, ni la doctrine de la validité purement idéale des concepts purs de l'entendement. Mais ce fait, la découverte des antinomies précédant la solution qu'il leur trouvera, est une preuve que cette doctrine doit lui être venue originairement d'une source extérieure." ¹ Tout le monde trouvera bien dans les faits relevés dans ces lignes une instigation à chercher s'il n'y a pas eu d'apport extérieur, mais personne n'y trouvera une preuve du fait qu'à tout prix il doit y en avoir eu une.

Robinson n'a pas été le premier à soupçonner l'origine des antinomies dans la philosophie contemporaine. Déjà E. Cassirer avait écrit à ce propos quelques lignes suggestives, et montré que plus d'un parmi les prédécesseurs immédiats de Kant avait envisagé le problème qu'elles posaient. ² Cassirer, en effet, cite Pierre Bayle qui discuta, dans son *Dictionnaire historique et critique*, les antinomies de Zénon, discussion qui provoqua un puissant remous dans les milieux philosophiques et scientifiques de l'époque. ³ Les problèmes zénoniens n'avaient point échappé à l'attention de Leibniz qui en parle à plusieurs reprises, s'inspirant chaque fois de l'argumentation de Bayle. ⁴ L'allemand Plouquet à son tour entraînait dans le débat, ⁵ mais il faut surtout retenir le nom d'Arthur Collier, un émule de Berkeley, qui consacra deux chapitres de sa *Clavis universalis* ⁶ pour énoncer

¹ L. Robinson, *Contributions à l'histoire de l'évolution philosophique de Kant*, dans *Revue de Métaphysique et de Morale*, 1924, t. XXXI, pp. 308-339. Le texte cité se trouve p. 309.

² E. Cassirer, *Das Erkenntnisproblem*, 3 éd., Berlin, 1922, t. II, p. 756.

³ P. Bayle, *Dictionnaire historique et critique*, article Zénon, Remarques F et G.

⁴ Leibniz, *Opera omnia*, éd. Gerhardt, VII, p. 467.

⁵ Plouquet, *Principia de Substantiis et Phaenomenis*, Frankfurt, 1764.

⁶ A. Collier, *Clavis universalis ; or, a new Inquiry after Truth. Being a demonstration of the non-existence, or impossibility of an external World*, Londres, 1713.

les thèmes des antinomies mathématiques.¹ Nous reviendrons là-dessus plus loin.²

S'appuyant sur l'indication assez vague de Cassirer, Robinson s'était fait un devoir d'étudier la question de plus près, et il concluait que la *Clavis universalis* fut la source où Kant a puisé, en 1769, la doctrine des antinomies. Cet ouvrage de Collier, très peu répandu, étouffé qu'il fut par l'idéalisme de Berkeley, avait paru en 1713, et il fut traduit en allemand en 1756 par Eschenbach, ensemble avec le dialogue *Hylas et Philonous* de Berkeley lui-même, et accompagné de notes critiques de la main du traducteur.³ Johan Christian Eschenbach avait été élevé à Iéna, comme auditeur du philosophe Darjes, dans l'éclectisme semi-wolfien, et il devint titulaire de la chaire de philosophie à l'université de Rostock. Il y mourut fort jeune, en 1769, à peine âgé de 40 ans, après une activité littéraire consacrée à combattre l'idéalisme et le mécanicisme.⁴ À ce titre, il traduisit les deux ouvrages que nous venons de mentionner en les pourvoyant de notes qui sont autant d'objections et de réfutations.

Je puis me dispenser d'exposer ici les idées de Collier. Robinson y découvre les antinomies mathématiques de Kant pour autant, toutefois, qu'elles se rapportent à l'espace, car Collier ne parle pas du temps. Si le monde extérieur a une grandeur et une étendue en dehors d'un esprit qui se le représente, cette grandeur doit être simultanément finie et infinie, de même qu'une matière externe est à la fois divisible à l'infini et non divisible. Cela ressemble de très près à ce que propose Kant. Mais pour pouvoir affirmer une contribution positive de l'oeuvre de Collier à la constitution de la doctrine kantienne des antinomies, il nous faut plus que cette apparente similitude. Il faut encore prouver que Kant se serait servi de cet ouvrage, et Robinson s'attache à le faire.

Sur quels arguments s'appuie-t-il ? Nous trouvons dans son article quatre arguments. Le premier consiste à remarquer la grande similitude, voir même, en quelques endroits, l'identité des deux doctrines en présence. En second lieu, Robinson découvre

¹ Dans les chapitres III et IV de la seconde partie.

² Cf. *infra*, p. 315 sq.

³ *Sammlung der vornehmsten Schriftsteller, die die Wirklichkeit ihres eigenen Körpers und der ganzen Körperwelt leugnen. Enthaltend des Berkeley Gespräche zwischen Hylas und Philonous und des Collier Allgemeinen Schlüssel. Übersetzt und mit widerlegenden Anmerkungen versehen, nebst einem Anhang, worin die Wirklichkeit der Körper erwiesen wird*, von Joh. Christ. Eschenbach, Rostock, 1756. Le *Bücherverzeichnis* de Heinemann porte Greifswald comme lieu d'impression.

⁴ Cf. sur Eschenbach l'ouvrage de Uebele sur J. N. Tetens, Berlin, 1912.

dans leur illustration respective de la doctrine l'emploi du même exemple. En troisième lieu, là où Kant se sépare de la doctrine de son prédécesseur présumé, la manière dont il le fait montre qu'il avait son ouvrage sous les yeux. Enfin, l'objection tirée du fait que Kant n'en a pas fait mention est vaine. Nous examinerons la valeur de ces arguments, mais, avant de le faire, il faut se demander si Kant a pu connaître la traduction d'Eschenbach.

Il ne possédait pas l'ouvrage dans sa bibliothèque.¹ Toutefois, on sait que, logé dans la maison du libraire Kanter, il lui empruntait très souvent les ouvrages qui venaient de paraître, sans les acheter.² D'autre part, quoique toutes les nouveautés n'atteignissent pas, sinon avec des retards considérables, la ville excentrique qu'était Königsberg, même vers la fin du siècle,³ rien ne nous dit que la traduction d'Eschenbach n'y soit pas arrivée. J'ai demandé à la bibliothèque de Königsberg si elle possède un exemplaire de la traduction et, dans l'affirmative, depuis quand. Il me fut aimablement répondu qu'elle ne le possède pas,⁴ de sorte que, sous ce rapport du moins, rien ne confirme, mais rien ne vient infirmer, la possibilité d'un emprunt de la part de Kant à cette traduction.

Il reste cependant une autre voie d'accès. Dans le même ouvrage, Eschenbach avait traduit le dialogue *Hylas et Philonous* de Berkeley. Si on pouvait montrer que Kant ne connaissait pas la doctrine de Berkeley en 1769, il est assez vraisemblable qu'il n'a pas davantage connu l'ouvrage d'Eschenbach. Le contraire cependant ne serait pas vrai, puisque, depuis quelque temps, on conteste moins que Kant fût en mesure de lire un texte anglais, et, si cela est vrai, rien n'empêche qu'il ait pu prendre connaissance des œuvres originales de Berkeley.⁵ La plupart des auteurs qui ont confronté les expositions que Kant a faites des opinions de Berkeley avec les textes mêmes se sont vus contraints de conclure que Kant était insuffisamment renseigné sur ces opinions, et que, probablement, il n'avait à sa disposition que des exposés de seconde main.⁶ Tels étaient les

¹ Warda, *Kants Bücher* (Berlin, 1922) ne le mentionne pas.

² Vorländer, *I. Kant, der Mann und das Werk*, t. I, p. 181-184.

³ Cf. De Vleeschauwer, *La Déduction*, t. III, p. 544.

⁴ Je remercie vivement le bibliothécaire en chef de la bibliothèque universitaire de Königsberg pour les renseignements que j'ai pu obtenir par son entremise.

⁵ Cf. Vaihinger, *Philosophische Monatshefte*, 1883, pp. 501 sq. et *Kommentar*, t. II, p. 500. Aussi Groos, *Kantstudien*, t. V, pp. 179-181.

⁶ Cf. Spicker, *Kant, Hume und Berkeley* (Berlin, 1875), p. 181 ; Riehl, *Der philosophische Kritizismus* (Leipzig, 1876), p. 161 ; Erdmann, *Kants Kritizismus* (Leipzig, 1878), p. 191, et *Archiv f. Gesch. der Philos.*, t. I, p. 64 ; Janitzsch, *Kant und Berkeley* (Strassbourg, 1879).

exposés de Hamann, de Hume et surtout de Beattie.¹ Vaihinger résume l'idée que Kant se fait de l'idéalisme berkeleyen de la manière suivante.² Berkeley, selon Kant, change le monde externe dans l'espace et le temps en un tissu d'apparences pures, et il arrive à cette opinion assez bizarre en constatant comment on est conduit à des contradictions inévitables en admettant la réalité objective de l'espace. Les contradictions en question ne visent pas les antinomies dont Berkeley lui-même ne parle jamais.³ Or Zimmermann a prouvé et, je crois, assez péremptoirement, qu'en général, Berkeley ne raisonne pas de la sorte, et qu'en particulier, Kant ne pouvait pas s'appuyer sur le dialogue traduit par Eschenbach comme source d'information sur la doctrine de Berkeley.⁴ Les libertés que prend Kant sous ce rapport constituent donc une présomption, mais, disons-le tout de suite, rien qu'une présomption, que Kant ne s'est pas servi de l'ouvrage d'Eschenbach comme source de renseignements sur l'idéalisme berkeleyen.

La question préalable ne conduisant pas à une certitude bien assise, il faut examiner un à un les arguments que Robinson invoque à l'appui de ses dires. Faisons-le, mais en intervertissant l'ordre qu'ils occupent chez lui. L'argument *ex silentio* n'a pas de valeur, dit Robinson.⁵ Kant ne cite pas Collier. C'est vrai, mais Kant cite rarement ses sources. Il ne cite pas Bayle, Hume, Berkeley, Descartes là où il leur fait des emprunts déterminables. D'ailleurs il était en général adversaire de cette méthode,⁶ et, enfin, il avait une raison particulière de ne pas attirer l'attention sur Collier, l'émule de Berkeley qui patronnait l'idéalisme auquel il refusait de se voir assimilé.⁷ Que vaut pareil raisonnement ? Disons immédiatement qu'en fait, Kant fait un usage très restreint de citations et de renvois, encore que, sous ce rapport, il ne faut pas exagérer dans l'autre sens non plus. En effet, il est évident que le nom de tous ceux qui ont contribué efficacement, d'une manière positive ou négative, à la constitution d'un élément important du criticisme, figure quelque part, quoiqu'en dise Robinson, dans l'*opus* kantien. C'est le cas

¹ Beattie est une des sources réelles où Kant a puisé beaucoup au sujet de la philosophie anglaise. Cf. *Essay on the Nature and Immutability of truth in opposition to sophistry and scepticism*. Edinbourg, 1770.

² Vaihinger, *Kommentar*, t. II, p. 499.

³ Cf. *Kritik*, Ak. t. III, p. 71 sq., et *Prolegomena*, Ak. t. IV, p. 288.

⁴ Zimmermann, *Über Kants Widerlegung des Idealismus von Berkeley*, Vienne, 1871, pp. 34-37.

⁵ Cf. Robinson, *loc. cit.*, p. 318.

⁶ Cf. *Reflexio*, 4957, Ak. t. XVIII., p. 41.

⁷ Robinson, *loc. cit.*, p. 319.

de Wolf, de Crusius, de Baumgarten, de Meier, de Leibniz, de Hume, de Descartes, de Malebranche, de Rousseau, de Newton, etc. D'autre part, si le voisinage de Berkeley représentait aux yeux de Kant un danger, ce danger n'existait point pour le *Nachlass*, nullement destiné à être divulgué, et ce danger n'existait pas encore en 1769 ou en 1770 pour la *Dissertatio*. Il existe à partir de 1771 comme je l'ai montré dans un article qui n'avait d'autre but précisément que de prouver cela.¹ Si on ne peut prouver de par ailleurs l'intervention de Collier, l'explication la plus naturelle et la plus plausible du silence de Kant reste toujours son ignorance de cet auteur et de ses idées.

Le troisième argument de Robinson fait état de deux textes de la *Critique* dans lesquels Kant prévient le lecteur.² Entretenant la solution des antinomies, Kant commence par mettre en garde ses lecteurs contre l'idéalisme empirique qui est celui de Berkeley.³ Dans les *Paralogismes*, d'autre part, il oppose l'idéalisme dogmatique et l'idéalisme sceptique dans un contexte où l'allusion aux antinomies est transparente.⁴ Cela montre que le problème des antinomies reste encore indissolublement lié dans la *Critique* à celui de l'idéalisme, en vertu de la simultanéité de leur invention. Je crois pour ma part qu'il faut accorder une valeur différente aux deux textes invoqués. Qu'on nous permette de le dire, le premier texte ne prouve absolument rien. Quant à l'autre, son importance est plus grande. Kant y dit, exactement comme dans une discussion des idées de Berkeley à un autre

¹ L'Année 1771 dans l'Histoire de la Pensée de Kant. *Revue belge de Philologie et d'Histoire*, t. XIII-XIV, 1934-1935, pp. 713-732 et pp. 49-83.

² Robinson, *loc. cit.*, pp. 319-321.

³ *Kritik*, ed. Ak. t. III, p. 339: "Man würde uns Unrecht thun, wenn man uns den schon längst so verschrieenen empirischen Idealismus zumuthen wollte, der, indem er die eigene Wirklichkeit des Raumes annimmt, das Dasein der ausgedehnten Wesen in denselben leugnet, wenigstens zweifelhaft findet, und zwischen Traum und Wirklichkeit in diesem Stücke keinen genugsam erweislichen Unterschied einräumt. Was die Erscheinungen des inneren Sinnes in der Zeit betrifft: an denen als wirklichen Dingen findet er keine Schwierigkeit; ja er behauptet sogar, dass diese innere Erfahrung das wirkliche Dasein ihres Objects (an sich selbst mit aller dieser Zeitbestimmung) einzig und allein hinreichend beweise."

⁴ *Kritik*, Ak. t. IV, pp. 236-237: "Der dogmatische Idealist würde derjenige sein, der das Dasein der Materie läugnet, der sceptische, der sie bezweifelt, weil er sie für unerweislich hält. Der erstere kann es nur darum sein, weil er in der Möglichkeit einer Materie überhaupt Widersprüche zu finden glaubt; und mit diesem haben wir es jetzt noch nicht zu thun. Der folgende Abschnitt von dialektischen Schlüssen, der die Vernunft in ihrem inneren Streite in Ansehung der Begriffe von der Möglichkeit dessen, was in den Zusammenhang der Erfahrung gehört, vorstellt, wird auch diese Schwierigkeit abhelfen."

endroit de la *Critique*, que l'idéalisme trouve des contradictions dans l'admission de l'existence de la matière.¹ Le terme *Widerspruch* dans *Critique*, pp. 69-70, était vague, mais ici, *Critique*, p. 319, il est plus explicite : ce n'est pas encore le moment de parler de ces contradictions. Kant le fera au chapitre suivant, en traitant des antinomies.² Si l'on veut comprendre ce texte, il faut supposer, dit Robinson, que Kant connaissait des idéalistes qui trouvent des antinomies au fond de la conception réaliste de la matière. Je n'en sais rien. Je sais seulement que, tout comme pour *Critique*, pp. 69-70, le texte des *Paralogismes* vise directement Berkeley qui, par malheur, ne connaissait pas ce problème et ne pouvait pas en parler. Mais le même texte contient une autre indication qui va nous conduire à une tout autre conclusion. L'idéalisme dogmatique, dit Kant, nie l'existence de la matière ; l'idéalisme sceptique la met en doute. Or l'allusion à l'idéalisme sceptique accompagne sans cesse l'exposition des antinomies, et Robinson en convient lui-même.³ Mais alors il ne s'agit pas ici de Collier, mais bien de Pierre Bayle, et je crois que Robinson n'est pas loin de l'admettre à son tour.⁴ Dès lors, il faut en convenir, le troisième argument que Robinson invoque, perd la plus claire partie de sa valeur probante.

Passons au second argument où Robinson fait état du fait que Collier et Kant, en parlant de ces contradictions, illustrent tous les deux leurs idées par l'exemple du cercle carré.⁵ Aucun professeur qui enseigne la logique à un auditoire d'étudiants ne me contredira, je pense, si je dis que nous avons là un de ces exemples classiques invoqués chaque fois qu'il s'agit d'expliquer en quoi consiste une notion contradictoire, du moins lorsqu'on ne se contente pas des signes : A est B, A est non-B. Il ne me paraît pas sérieux de fonder une parenté historique quelconque sur l'analogie d'un procédé aussi commun. D'ailleurs, si cette coïncidence avait la bonne fortune d'impressionner encore quelqu'un, remarquons que le même exemple fut employé en 1762-1763 par Kant, notamment dans le *Beweisgrund*, qui ne s'occupe aucunement des antinomies.⁶ D'autre part, voudrait-on reculer l'influence que Kant aurait subi de la part de Collier à une date aussi éloignée, la traduction d'Eschenbach étant de 1756, nous ne comprenons plus rien de la période précritique, et surtout nous ne comprenons plus rien de la petite dissertation de 1768 sur la distinction des lieux dans l'espace, dont le réalisme spatial est le plus extrême que Kant ait jamais conçu.

¹ *Kritik*, Ak. t. III, pp. 69-70.

² Robinson, *loc. cit.* p. 320.

³ *Ibid.*, pp. 317-318.

⁴ *Ibid.*, IV, p. 237.

⁵ *Ibid.*, p. 321.

⁶ *Beweisgrund*, ed. Ak. t. II, p. 17.

Reste donc uniquement la similitude des doctrines. Robinson apporte à sa thèse les restrictions indispensables : l'emprunt que Kant fait à Collier n'est pas l'emprunt d'une doctrine complète, mais plutôt l'emprunt de la simple idée d'antinomies, et il a un mot heureux pour faire entendre ce qu'il veut dire : la doctrine de Kant est à celle de Collier ce qu'un drame de Shakespeare est à la source littéraire où le poète a puisé son sujet. Ensuite, seconde restriction : l'emprunt, quelqu'il soit, ne concerne que les antinomies mathématiques, nullement les antinomies dynamiques.¹ En confrontant les textes de Collier et de Kant, on pourrait à la rigueur trouver un nombre impressionnant d'analogies, mais il n'est pas moins certain que les différences l'emportent quantitativement et qualitativement, et cela se comprend vu la solution originale que Kant donnait au problème. Cette confrontation prendrait trop de place et je me borne à signaler ici l'enseignement auquel elle conduit à mon avis.

D'ailleurs, la première restriction que Robinson apporte à sa thèse me dispense de cette confrontation qui demanderait une étude détaillée. Tout ce que Kant aurait emprunté à Collier serait la simple idée des antinomies mathématiques. Je me pose alors la question qui vient d'elle-même à l'esprit d'un historien : est-il absolument impossible que Kant ait trouvé l'idée de contradictions inévitables résultant de l'espace absolu ailleurs que chez Collier ? Si l'on parvenait à montrer que, de toute façon, Kant n'a pu tenir cette idée d'autre part, alors on pourrait admettre la probabilité d'une influence de la part de Collier.

L'idée des antinomies mathématiques consiste en ce que, tout d'abord, l'infinité et la finité du monde, et ensuite la divisibilité ou non-divisibilité du monde à l'infini sont également déduisibles d'une conception substantialiste de l'espace et de l'étendue. Or non seulement ce n'est pas à Collier que revient le mérite d'avoir attiré l'attention sur les conséquences paradoxales auxquelles Kant a donné le nom d'antinomies, mais l'ouvrage de Collier ne fait figure que de menu incident dans un débat de grande envergure auquel participent au complet le monde philosophique et le monde physique de l'époque. En remontant d'échelon en échelon, on voit que le paradoxe de la divisibilité à l'infini fut à l'origine de tout : c'est lui qui a amené le paradoxe de l'infinité du monde et c'est encore lui qui a ému l'idéalisme anglais naissant et l'idéalisme monadologique en Allemagne.

Chose curieuse, ce n'est ni un Anglais, ni un Allemand qui occupe la première place dans cette discussion : c'est le Français Pierre Bayle qui, dans son *Dictionnaire*, ressuscite la doctrine de

¹ Robinson, *loc. cit.*, p. 321.

l'Eléate Zénon et qui fit observer que, lorsqu'on reconnaît une existence réelle à la matière, on arrive à devoir affirmer simultanément qu'elle est divisible à l'infini et que, néanmoins, elle est composée de points simples et par conséquent indivisibles.¹ Il ne manqua pas d'en tirer une conclusion très importante : la conception réaliste du monde physique aboutit à des contradictions internes inévitables. Elle est donc fausse,² et l'idéalisme que Bayle tenait d'ailleurs de Malebranche, s'en trouva renforcé d'autant.³

L'article de Bayle était l'étincelle qui mit le feu aux poudres. Autour de cet article un débat violent allait s'engager en Allemagne et en Angleterre. Leibniz avait déjà rencontré sur son chemin les difficultés du continu, indépendamment de Bayle. En 1676, il raisonnait de la manière suivante : si l'on admet pour le continu une composition par éléments réels simples et indivisibles, on s'expose à accorder une existence objective à de pures abstractions. Nie-t-on d'autre part cette composition, la réalité du continu est réduite à néant. Pour en sortir, il en appelle à une création indéfiniment répétée de Dieu.⁴ Une fois la monadologie mise au point, la même difficulté se présente mais avec plus d'insistance encore. Leibniz entretemps avait appris à connaître l'argumentation de Bayle et se porte garant de sa valeur réelle.⁵ La monadologie, au surplus, fait état de monades simples, indivisibles comme éléments constitutifs de la matière, alors que la rigueur mathématique cartésienne l'obligeait à croire à un espace et à une étendue divisibles à l'infini. Si cet espace est un être substantiel, l'ordre mathématique descend dans l'ordre physique et il en naît une matière infiniment divisible et composée quand même de points ou d'éléments indivisibles. La seule solution acceptable restait dans ce cas celle de nier le caractère substantiel et absolu de cet espace, de voir en lui uniquement l'ordre des phénomènes, et de voir dans cet élément simple ou, comme il s'exprime, dans l'infiniment petit non une partie réelle de la matière, mais un concept purement méthodologique sans lui accorder une existence réelle.⁶

¹ P. Bayle, *Dictionnaire historique et critique*, article Zénon, Remarque F.

² *Ibid.*, article Zénon, Remarque G. Cassirer : *Das Erkenntnisproblem*, t. I, p. 593, renvoie ici opportunément à un texte de *Kritik*, éd. Ak. t. III, p. 504 et p. 517.

³ P. Bayle, *Dictionnaire historique et critique*, article Zénon, Remarque G.

⁴ Leibniz, *Pacidius Philalethi* dans *Opera omnia*, éd. Gerhardt, VII, p. 624.

⁵ Leibniz à Basnage, 1698. Cf. Leibniz, *Opera omnia*, éd. Gerhardt, VII, p. 467.

⁶ Leibniz à Bernouilli, 1698. Cf. *Opera omnia*, éd. Gerhardt, *Mathem. Schriften*, t. III, p. 499.

En Angleterre, l'action exercée par l'article de Bayle ne fut pas moins profonde. Déjà dans le dialogue traduit par Eschenbach, Berkeley avait conclu à la nécessité de l'idéalisme absolu.¹ Il y était conduit principalement par l'analyse de la perception des caractères spatiaux des choses,² mais aussi en remarquant comment le réalisme aboutit fatalement aux contradictions révélées par Bayle et déjà reprises par Leibniz. L'espace absolu sacrifié à la logique, la matière absolue suivit tout naturellement.³ Ce fut Collier qui s'inspirait le plus étroitement de Bayle, parce que, comme ce dernier, Collier s'avouait idéaliste sur la foi du même Malebranche que l'on trouve à l'origine de la conception de Bayle.⁴ Il expose avec force les contradictions insolubles inhérentes au continu en conflit avec l'infinie divisibilité de la matière et de l'espace, et il développe sur la foi de ces contradictions une violente attaque contre l'absoluité de l'espace.⁵

En effet, Berkeley, Collier et Leibniz devaient se mesurer sur ce point avec un adversaire de taille, avec Newton qui avait réussi à grouper autour de lui une école composée à la fois de philosophes et d'hommes de science. La thèse de l'espace absolu, thèse essentiellement physique et fondée d'abord sur des considérations purement scientifiques, rejoignait certaines positions métaphysico-théologiques en honneur en Angleterre : Henri More, Cudworth, Raphson et Samuel Clarke avaient fait de l'espace absolu un élément important dans la démonstration de l'existence de Dieu.⁶ Law et Berkeley ne manquèrent pas de combattre vigoureusement cette alliance.⁷

Le plus important produit de la lutte autour des écoles porteuses de deux conceptions rivales du monde, fut la correspondance échangée entre Clarke et Leibniz, réservée d'abord à l'intimité d'un commerce épistolaire, mais publiée par après.⁸ Cette

¹ *Hylas à Philonous*, 1713, et aussi dans les *Principles of Human Knowledge*, 1710.

² Berkeley, *An Essay towards a New Theory of Vision*, 1709.

³ Surtout *Hylas a. Philonous*, Dialogue III.

⁴ *Clavis universalis*, éd. Bowman, p. 16 sq.

⁵ *Ibid.*, pp. 63 sq.

⁶ Cudworth, *The True Intellectual System of the Universe*, Londres, 1678 ; H. More, *Enchiridium metaphysicum*, Londres, 1679 ; J. Raphson, *De spatio reali*, Londres, 1702 ; S. Clarke, surtout, *A Discourse concerning the Being and Attributes of God*, Londres, 1705-1706.

⁷ Berkeley, *De Motu*, 1721 ; E. Law, *An Enquiry into the Ideas of Space, Time, Immensity and Eternity*, Cambridge, 1734 ; J. Butler, *Letters to the Rev. Dr. Clarke*, Glasgow, 1823.

⁸ *A Collection of Papers which passed between the late learned Mr. Leibniz and Dr. Clarke in the years 1715 and 1716 relating to the principles of natural philosophy and religion*, Londres, 1717. Publié en allemand, préparé par Wolf, à Franckfort en 1720.

publication eut un retentissement considérable dans toute l'Europe savante et aux auteurs, disparus de la scène du monde, succédèrent de nombreux partisans qui poursuivirent ardemment la discussion. Leibniz trouva des alliés anglais dans tous les tenants de l'idéalisme ; Clarke de son côté n'en groupa pas moins autour de son drapeau.¹ Il est impossible d'étudier ici leur contribution respective au débat. Elle ne se révèle d'ailleurs pas très importante. En Allemagne, toute l'école wolffienne suivit en bataillons serrés son philosophe national. Parmi ses disciples il faut faire une place à part à Plouquet² et à Boscovitch,³ qui, plus que les autres, appuyèrent leur discussion du problème sur les paradoxes qui deviendront les antinomies kantienues. Il est inutile d'ajouter que la conception réaliste de l'espace en sortit fort mal en point aux yeux de l'Allemagne philosophique. On voit qu'en même temps, le débat prend une tout autre tournure, qui rejoint la pensée précritique de Kant. La discussion des difficultés résultant du conflit entre la divisibilité infinie et l'espace absolu tourne en une confrontation—matières et méthodes—de la géométrie et de la philosophie,⁴ et ici se dessinent clairement les contours historiques dans lesquels se développe la réflexion précritique de Kant.

D'autre part, il n'en est pas moins vrai qu'en Allemagne aussi le monde scientifique proprement dit ne quittait que difficilement le champ de la pensée de Newton, et il est naturel qu'à côté des extrémistes de l'un ou de l'autre camp, certains penseurs tentassent une conciliation entre Newton et Leibniz.⁵ Pour ne citer qu'un seul auteur, universellement réputé et bien connu de Kant, Léonard Euler a fait pour ainsi dire de cette conciliation son programme. De 1736 à 1768 s'échelonnent une série d'ouvrages où directement ou indirectement il tente de surmonter l'antithèse des écoles au sujet de l'espace et de son caractère

¹ Pour Clarke, par exemple, après la première génération : J. Jackson, *The Existence and Unity of God*, Londres, 1734 ; J. Clarke, *Examination of Dr. Clarke's Notion of Space*, Cambridge, 1734 ; Is. Watt, *Philosophical Essays on various Subjects*, Londres, 1732 ; Ramsay, *The Philosophical Principles of Natural and Revealed Religion*, Glasgow, 1748, etc., etc.

² *Principia de Substantiis et Phaenomenis*, Franckfort-Leipzig, 1764.

³ *Theoria Philosophiae naturalis redacta ad unicum legem virium in natura existentium*, Venise, 1763.

⁴ On sait que Kant y a consacré la *Monadologia physica* (1756) et surtout la *Dilucidatio* (1756). Cf. pour cette question, de Vleeschauwer, *La Déduction*, t. I, pp. 88-104.

⁵ Cf. Voltaire, *La Métaphysique de Newton ou Parallèle des sentiments de Newton et de Leibniz*, Amsterdam, 1740 ; Buéquelin, *Conciliation des idées de Newton et de Leibniz sur l'espace et le temps*, Berlin, 1769.

paradoxal.¹ Sans doute, il est plus proche de Newton, puisqu'au sujet de la réalité de l'espace, il est l'adversaire le plus déclaré de Leibniz, qu'il suit pourtant dans sa conception de l'infini.² Notons que le jour où Kant publie sa dissertation sur l'espace (1768), dans laquelle il cite l'ouvrage de Euler consacré à l'espace et au temps, ce dernier publie (1768-1769) ses *Lettres à une Princesse allemande*,³ où domine la tendance conciliatrice et où les difficultés suscitées entre les écoles sont notées et résolues dans le même sens.

Tout cela ne prouve peut-être pas grand-chose directement, mais cela démontre néanmoins que les questions relatives aux antinomies mathématiques n'ont pas été soulevées par un seul auteur, où Kant les aurait puisées, et qu'elles le furent pour ainsi dire par tous ceux qui cultivaient la philosophie et la physique. Elles forment ensemble un des grands problèmes à l'ordre du jour au XVIII^e siècle. Enseignement et littérature concourent à élucider les bizarreries que Bayle avait rappelées à la vie, de sorte qu'il nous paraît plus prudent de croire que les antinomies mathématiques n'ont pas une origine unique, mais qu'elles sont le fruit de la très grande lecture qu'avait fait Kant à cette époque de ses contemporains de tous les pays. Car, enfin, Maupertuis et d'Alembert aussi se sont attelés aux mêmes difficultés.⁴ Il en résulte qu'il est impossible de déterminer avec plus de précision la source à laquelle Kant serait redevable, en ordre principal, de sa pensée sur la question de l'espace et sur celle de l'infini. Plutôt que le traité de Collier, dont la connaissance n'est ni prouvée ni sûre, l'ambiance générale est le grand réservoir dans lequel Kant a puisé, ambiance avec laquelle il a vécu en un contact permanent et des plus étroits.

Je ne conclus pas du tout qu'il est impossible que Kant ait connu Collier : ce serait tomber dans l'exagération contraire. Je conclus que rien ne prouve sa collaboration et que tout concorde à en faire la moins vraisemblable des possibilités. Je ne conclus même pas que Kant a fait appel plus spécialement à un auteur déterminé quel qu'il soit, puisqu'il est fort admissible

¹ *Mechanica sive motus scientia analytice exposita*, 2 vol., St. Petersburg, 1736-1742 ; *Réflexions sur l'espace et le temps*, Berlin, 1748 ; *Institutiones calculi differentialis*, 1755 ; *Theoria motus corporum solidorum seu rigidorum*, Rostock, 1765.

² *Lettres à une Princesse allemande*, St. Petersburg, 1768-1769.

³ Cf. Cassirer, *Erkenntnisproblem*, t. II, pp. 472-485.

⁴ Cf. Maupertuis, *Examen philosophique de la preuve de l'existence de Dieu*, Berlin, 1756 ; *Essai de cosmologie*, Lyon, 1752 ; *Lettres de Maupertuis*, 1752 ; D'Alembert, *Eléments de Philosophie*, Paris, 1759 ; *Mélanges de littérature et de philosophie*, 5 vol., Amsterdam, 1763-1770.

que, ruminant les mêmes problèmes pendant que nationaux et étrangers amoncellent leurs ouvrages sur la question, Kant a trouvé, sans emprunt direct, l'idée des antinomies comme le résidu propre de ses réflexions personnelles. D'ailleurs les expressions de Kant sont d'une remarquable prudence, et même d'une remarquable ambiguïté. L'année 1769 me donna une grande lumière, dit-il. Est-ce que cela veut dire que le criticisme soit sorti des antinomies ? Pas nécessairement, puisque ce texte n'annonce qu'une collaboration du problème à la genèse de l'idéalisme critique. Le texte *peut* signifier que cet idéalisme a sa *ratio fiendi* dans les antinomies, mais rien n'empêche que le contraire ait pu avoir lieu : que l'invention de l'idéalisme critique ait fourni la solution définitive du problème actuel par excellence qui préoccupa si fortement tout le monde savant de l'époque. Alors la grande lumière dont il s'agit consisterait dans l'illumination de la vérité de l'idéalisme critique, capable désormais de résoudre ce qu'on appelait les paradoxes du continu et les antinomies de l'infini. La grande lumière dans ce cas indique non une invention, mais une confirmation. Les *Nouveaux Essais* de Leibniz récemment publiés auraient pu fournir la distinction entre les facultés de connaître, ensemble avec l'idéalisme critique et la solution des antinomies que cet idéalisme comporte, tout comme la présence des antinomies a pu déterminer la distinction entre les facultés. Quelle que soit des deux solutions celle à laquelle l'on s'arrête, l'ambiance immédiate et générale dans laquelle se meut Kant me paraît pouvoir servir bien mieux d'instigateur à la réflexion kantienne que l'ouvrage d'un étranger qui, même traduit, resta peu connu. Il n'empêche que, d'un point de vue historique, la convergence de pensée de notre Anglais avec celle de l'époque est d'une importance considérable pour celui qui veut saisir la physionomie intellectuelle d'une période longue de près d'un siècle, pendant laquelle l'Europe philosophique et physique atteignent peu à peu les hauteurs modernes.

III.—THE "POLYTHEISM" OF PLATO: AN APOLOGY.

BY F. M. CORNFORD.

IN MIND, No. 186, Prof. A. E. Taylor has replied to some of the criticisms made in my *Plato's Cosmology* of the principles underlying his interpretation of the *Timaeus*. I welcome this opportunity for defining my position more fully. Both in published reviews and in correspondence with me, Mr. Taylor has been most generous in praising certain parts of my work. I am sorry if some of my remarks, which were necessarily brief, have also seemed brusque and wanting in the respect due to the most learned of English Platonists. I had better confess that I was irritated by some features of his Commentary. Mr. Taylor will know that this feeling is not personal. I have never been privileged to meet him; my efforts to get him to lecture at Cambridge have been defeated by adverse circumstances; and our letters have always been friendly. Why I was irritated, I do not know. There must be something wrong with me, some complex which only an analyst could drag to light. But evidently my attempts to conceal this irritation have not been wholly successful, and I must meet his *apologia* with an apology.

The existence of his Commentary was in some ways embarrassing. It contains a most valuable mass of material, partly collected from ancient sources, partly contributed by Mr. Taylor himself in his thorough discussion of innumerable problems. Any subsequent editor or translator is bound to absorb this material and to acknowledge his debt, as I did, in general terms. But he cannot, without overloading his notes, indicate in detail all the benefits he has received and all the errors from which he has been saved. On the other hand, knowing that every serious student of the *Timaeus* will read the Commentary, he cannot avoid saying why he disagrees with it here and there. The unfortunate consequence is that he will appear to be less grateful and more captious than he feels. All this I tried to say, perhaps too briefly, in my preface.

In the rest of the preface I raised objections to three features which run all through the Commentary, and seem to me to distort its interpretation of Plato. The most important is 'the main thesis' that 'the teaching of Timæus can be shown to be in detail exactly what we should expect in a fifth-century Italian Pythagorean who was also a medical man', and that 'what the *Timæus* loses', if this view is sound, 'as an exposition of Platonism, it gains as a source of light on fifth-century Pythagoreanism'. Mr. Taylor takes Timæus' opening description of his discourse as a 'likely tale' to mean that the theories need be no more than 'the best approximations to the truth that could be expected from a geometer-biologist' living two or three generations before the dialogue was written. 'It does not follow', he writes, 'that *any* theory propounded by Timæus would have been accepted by Plato as it stands'. Now the words 'likely tale' are used in the proem and they cover the entire account of the visible universe, including all that is said about the Demiurge and the created gods. If Mr. Taylor's thesis applies to the theology—and I do not see how that can be detached from the rest—he and I have not the common ground on which to debate the theological opinions of Plato. I believe that Plato is expressing his own opinions; but there is a real difficulty in discovering from the Commentary whether Mr. Taylor regards Plato or his fifth-century Pythagorean as responsible for any given statement.

In his *Apologia*, however, Mr. Taylor appears to make Plato wholly responsible for the theology, and so restores the possibility of argument about the second feature to which I objected. I described this as 'the suggestion that Plato (or Timæus?) is at heart a monotheist and not far from being a Christian. The Demiurge is not fully recognised as a mythical figure, but credited with attributes belonging to the Creator of *Genesis* or even to the God of the New Testament'. I referred to two passages which explain what attributes I had specially in mind. One is the Christian God's love of his creatures; the other is omnipotence.

The passage in which Mr. Taylor discovers an allusion to God's love is Timæus' statement that the Demiurge, being good, was incapable of that jealousy (*φθόνος*) ascribed by Greek religion to the Olympians, who grudged to mortals a perfection and felicity like their own. Accordingly, he wished to produce a world 'as like himself'—that is to say, as good—'as possible'. I quoted Mr. Taylor's comment: 'So just because God is good, He does not keep his blessedness selfishly to Himself. He seeks to make something else as much like Himself as possible in

goodness. It is of the very nature of goodness and love to "overflow". That is why there is a world and why, with all its defects, it is "very good". I remarked that 'if this is intended as a paraphrase of Plato's words, it is misleading' and that there is not 'the slightest warrant in Greek thought of the pre-Christian centuries for the notion of "overflowing love", or love of any kind, prompting a god to make a world'.

Mr. Taylor now says that it does not seem to have occurred to me that he was 'intending an allusion not only to the sayings of the Christian mystics about the love which "cannot be idle", but to the Neo-Platonic thesis that the supreme "One", which is also the "Good", *must*, because it is "more than full" (*ὑπέρπληρες*) "overflow". It is just because it is good that it "flows over".' It is true that I did not tax Mr. Taylor with ascribing the Neo-Platonic doctrine of emanation, as well as Christian ideas, to Plato or to a fifth-century Pythagorean, because the Commentary does not, I think, elsewhere identify the Demiurge with the supreme One who is also the Good, any more than the Neo-Platonists themselves identified them. But Mr. Taylor now continues: '*Timæus* tells us that it is a sufficient answer to the question why the Demiurge should "make" at all, to say that he is good, and *therefore will not keep his goodness as a solitary possession for himself, but will communicate it to something else*. There is, as it seems to me, a real analogy between *this thought of a goodness which will not let its possessor be content with the having of it to himself* and the later thought, to which I alluded, of the "love which cannot be idle", and I hold that I was justified in indicating the analogy. That there is more than an analogy I did not say and do not say' (italics mine).

This defence admirably illustrates the point of my objection. There is, no doubt, a resemblance between Timæus' thought as Mr. Taylor expresses it and the Christian and Neo-Platonic notions. But it is Mr. Taylor who has imported the resemblance in the words I have italicised. Plato's text says nothing about the Demiurge communicating his own overflowing goodness or being too unselfish to keep it as a solitary possession for himself. When you say that a good craftsman wishes his work to be as good as possible, you do not imply that he is unselfishly letting his own goodness overflow into his work. When Plato adds that his god is not like the Olympians who grudgingly punished any mortal setting up to be as happy as they were, he must not be taken to imply that the Demiurge was filled with overflowing love and thereby impelled to communicate his blessedness, unless it can be shown that such a thought is to be found elsewhere,

not in the Christian mystics or the Neo-Platonists, but in Plato or in other pre-Christian writers. Mr. Taylor has produced no evidence of its existence there. All he has produced is Plato's belief that the just man is *θεοφιλής*, the unjust *θεομισήs*. The word *φιλεῖν*, as Mr. Taylor knows, covers, like the French *aimer*, any sort of liking, ranging from a man's fondness for wine or horses through all the shades of social solidarity and personal friendship and affection. The compound *θεοφιλής*, 'favoured by heaven', Horace's *dis carus*, does not attribute to the gods anything like a love that must overflow in creation, and I cannot see that it is relevant.

This may seem a small matter; but it struck me as symptomatic of a persistent tendency making for the equation of the Demiurge with the one God of the Bible, the omnipotent maker of heaven and earth and the loving Father of mankind. I added that 'it is not fair either to Plato or to the New Testament to ascribe the most characteristic revelations of the Founder of Christianity to a pagan polytheist'. If I were asked to define Plato's religious position in two words, I should not say that he was a pagan polytheist; but the context makes it clear that by 'pagan' I meant 'heathen' or 'non-Christian', not a man who denies any moral government of the world or 'extols the following of "blood instincts"'. I agree with Mr. Taylor that Plato was not in that sense a pagan. As for 'polytheist', if I knew as much as Mr. Taylor knows of the Christian Fathers, I suspect that I could justify the application of this term to a philosopher who proposed to institute a cult of all the host of heaven and did not regard the question of one god or many as of primary importance. But I do not wish to defend the word, and I now admit that it is, on the whole, truer to say that Plato was at heart a monotheist than to say that he was not. He may have combined polytheism and monotheism in somewhat the same way that St. Thomas found to justify what a strict Jew or Mohammedan might regard as the polytheism of the Roman Church. This is a case in which I have overstressed one side of Plato's thought, in trying to correct too much emphasis on the other. I might, indeed, quote Paul More: 'Conformably with the free manner of Greek theology, the personal cause is regarded now as the one God, and now *polytheistically* as a company of lesser gods'. But More had just referred to the well-known fact that the Hellenistic Fathers use the word *theos* with the same freedom as the Greek philosophers, and I agree with Mr. Taylor that this was not incompatible with their monotheism.

More goes on to say that the subordination of the lesser gods

to their Father in the *Timaeus* 'is not much more than a convenient fiction for the fact that we cannot comprehend the relation between a perfect creator and an imperfect creation'. The fiction, however, is something more than convenient. This brings us to the second attribute of the Christian God which is not shared by the Demiurge: omnipotence. If Christian writers could call the angels 'gods', they did not credit them with any responsibility for creation. That rested solely with the one God, whose power was not restricted by any recalcitrant material factor. When I said that the Demiurge was a mythical figure, not to be equated with the one God of the Bible, who created the world out of nothing and who is also the supreme object of worship, it was this unrestricted omnipotence of the Christian Creator that I had in mind. Mr. Taylor seems to have misunderstood me here. I did not accuse him, as he infers, of importing the doctrine of creation *ex nihilo* into the *Timaeus*. And I must have failed to make clear my objection to his note: 'The physical world, then, has a maker' (according to *Timæus*' statement) . . . 'This means, exactly as the dogma of creation does in Christian theology, that the physical world does not exist in its own right, but depends on a really self-existent being, the best $\psi\upsilon\chi\acute{\eta}$, God, for its existence'. I remarked that here Mr. Taylor 'outruns Plato's exposition'. I meant that the text of the *Timaeus* does not tell us that the world's having a maker means that it depends for its existence on a really self-existent being, still less that this being is the 'best $\psi\upsilon\chi\acute{\eta}$ ' of the *Laws*—a statement which seems to me at least questionable. Mr. Taylor has told us here what Plato means; Plato himself has refused to tell us; he will say no more than that 'it is a hard task to find the maker and father of this universe, and having found him it would be impossible to declare him to all mankind'. Mr. Taylor further asserts that what Plato means is exactly what the Christian dogma of creation means; and I understood him to imply that the Christian dogma of creation means neither more nor less than this dependence of the world on God. But now Mr. Taylor confirms my own impression that the Christian dogma means at least something more. In his paper he says that creation *ex nihilo* is part of the Christian dogma, and he quotes St. Thomas to the effect that we know that the universe has not always existed 'from the authoritative declaration of God himself in the Pentateuch that "in the beginning God made heaven and earth"'. Mr. Taylor and I agree that this is not Plato's doctrine. That being so, I still regard his note as misleading. I am unmoved by St. Thomas' subtle devices for reconciling this

part of the Christian dogma with the Platonic and Aristotelian doctrine that the world is eternal. Nor can I accept the Augustinian interpretation of the first words of *Genesis*, 'according to which the "beginning" meant is not a "first moment", but the divine Word or Wisdom itself'. With the deepest admiration for St. Augustine, I cannot take him here as a safe guide to the sense of the Hebrew text. The very fact that learned and Platonising Fathers and schoolmen were driven to shifts like this, shows that ordinary Christians, then as now, understood 'in the beginning' correctly, in its simple and natural sense. Reciting the creed, they confess their belief in one God (and only one) who is almighty, who made heaven and earth (in the beginning, out of nothing), and who is the same as the God they worship; and they mean this statement literally, not as a 'likely tale'. In Plato's myth, on the contrary, the Demiurge is associated with other gods who take part in ordering the world; he is not represented as almighty; he did not create either the materials or the ideal pattern; the order of the world credited to him had no beginning in time; it is nowhere suggested that he should be worshipped; and it is open to doubt to what extent and in what sense he can be distinguished from the world itself, an eternal and blessed god with a reasonable soul. Such a creator is mythical in a sense in which the Christian Creator is not. I wished to guard the reader against the impression which seemed to me to be conveyed by Mr. Taylor's note: that Plato's statement that the world has a maker means exactly the same thing as the Christian dogma of creation. The really serious consequence of obliterating all the distinctions above enumerated is that it leads to the explaining away of the second factor in the world, which Plato calls Necessity and represents as limiting the power of his Demiurge. In that matter I agree, in substance, with Plutarch: 'Those who make God responsible for nothing and those who make him responsible for everything alike miss the due mean. So it is well said that Plato, by his discovery of an element underlying the generated qualities,—what is now called "matter" or "nature"—has delivered philosophers from many serious difficulties', and with More's comment: 'His dualism saved him from the metaphysical agony that sometimes troubles a monistic theology'. Mr. Taylor does explain away Necessity or the Errant Cause, when he reduces it to arrangements which cannot be seen by us, in the imperfect state of our knowledge, to serve a good purpose, though in fact they do so. 'If we could ever have complete knowledge, we should find that ἀνάγκη had vanished from our account of the world' (*Comm.*

p. 301). This surely means that for God, whose knowledge is presumably complete, Necessity has no existence.

Mr. Taylor suspects me of having my 'mind full of a rather crude notion of divine omnipotence as meaning ability to "do anything and everything"', and he cites Leibniz as a creationist with a very high conception of divine omnipotence, who would have explained the unfortunate brittleness of the bones protecting the brain by his doctrine that God cannot combine the impossible. 'But the reason why God cannot do so is not that He is confronted by conditions independent of Him in the face of which he is powerless, but that the undertaking is, in its own nature, irrational, and is therefore made impossible to God by His own intrinsic rationality. He cannot make bones which have the other qualities of bone without its brittleness for the same reason that he cannot make another God, or make it false that an event which has happened has happened.' But is the reason really the same? I can see nothing intrinsically irrational in making bones that would be hard enough to protect the brain and yet not brittle; and a creator with an absolutely unlimited control over all his materials might be expected to achieve this feat. I cannot therefore agree that 'the same distinction between the "work of God" and the "work of necessity"' exemplified by this instance recurs in Leibniz.

Mr. Taylor, however, adds that he is not suggesting that Plato is a Leibnizian, and he falls back on another line of explanation. 'If we ask why every arrangement of things which might appear to us to be desirable is not compossible with every other, Plato's language leaves it *possible* to suppose that the reason lies in some external limitations restricting the "maker of all things", but it does not *necessitate* that interpretation. There is nothing in what he says inconsistent with the belief that the liability of our bones to fractures, however inconvenient to ourselves, may yet, in some unknown way, contribute to the "good of the whole".' According to this view, when our skulls are cracked we are to console ourselves, not with the reflection that it would have been intrinsically irrational to provide us with bones that were hard and yet not brittle, but with the belief that our misfortune positively makes the world a better place. Memories of Dr. Pangloss crowd into one's mind; but Plato, of course, had never read that moderate man, Voltaire. Even so, I find it strange that, if this was Plato's explanation, he should not at least have indicated it somewhere in the *Timaeus* itself. Mr. Taylor can only point to a moral exhortation in the *Laws*, where the young man is warned against imagining that

the world is designed with a view to his individual happiness. The work of any physician or other craftsman is done for the sake of a whole; 'he strives after what is best in general, and he produces a part for the sake of a whole, and not a whole for the sake of a part' (Bury's trans.). Mr. Taylor admits that it is just possible to take this as 'meaning no more than that the "craftsman" to whom the moral order of the world is due does the best he can for "the whole", when the difficulties of the task are fairly taken into account'. Some passages in the *Timaeus* seem to me to favour that interpretation. Mr. Taylor has not produced one to favour his own. It must be left to the reader to decide which of the two best accords with Plato's text.

I must also leave him to judge whether Mr. Taylor is quite fair in describing my procedure thus: 'If you start by docketing *A* as a "pagan polytheist" and *B* as a "Christian monotheist", and imagine yourself to have plucked the heart out of their mystery, why then, I should say, unless both men are of a very common-place order of mind, you will only succeed in misrepresenting them both alike'. This sentence occurs in a paragraph which seems to imply that I regard Plato as incapable of inconsistency. I do not; but the difficulty confronting Mr. Taylor and me and every other interpreter is to define the limits beyond which we cannot tell whether Plato, who deliberately and on principle conceals the heart of his mystery, was consistent or not. We can, none of us, justify inconsistency in our own interpretations merely by pleading that Plato was not immune from the common lot of mankind, and that the most religious philosophers are the most likely to be inconsistent when they come to the ultimate questions.

In this matter of reading Christian notions back into Plato, what seems to happen is this: (1) Plato declares, let us say, that the world is eternal and fashioned out of pre-existing materials which were not made by the Demiurge. (2) The primitive Christian doctrine is that the world had a beginning in time and the materials were created out of nothing. (3) Fathers and schoolmen who reverence both the authority of Scripture and the teaching of Plato, with great ingenuity devise expedients for reconciling what appears to be a contradiction. (4) The Church accepts the reconciliation, and in time comes to believe that its own doctrine has always meant something compatible with Plato's. (5) Modern scholars then tell us that Plato meant exactly what the Church now teaches about creation. (6) To other scholars falls the ungracious task of pointing out that, if the Church has managed to absorb the Platonic doctrine, it yet

has a revelation of its own, not derived from Plato, and that to import these foreign elements into the interpretation of the *Timaeus* is misleading. (7) They are then charged with ignorance of the reconciling expedients of St. Thomas or St. Augustine.

It was because of the larger issues involved that I called attention to two passages in the Commentary which served as straws to show that the wind was blowing in the direction of making the Demiurge an omnipotent creator. One I have already dealt with. The other was the note on 69c, 3, καὶ τῶν μὲν θείων αὐτὸς γίγνεται δημιουργός: 'That is, God is the αὐτουργός of the "divine" in us, the *anima rationalis*. Since the αὐτουργός, the "peasant" who tills his piece of ground with his own hands, is always regarded as in a particularly lowly position . . . the words are worth noting. It is generally said that the thought of God as humbling Himself in the service of His creatures, indeed, as being accessible to them at all, except through the mediation of a whole hierarchy of officials, "angels" and the like, is specifically Christian and not Hellenic, and there is truth in the remark if it is not pressed too far. Hence an expression like that used here deserves to be noted as showing that its author understood the principle of the words "I am among you as one that serveth". It is only the subsidiary work which the Creator deposes to the minor gods; He executes the main task with his own hands.'

I thought, and still think, that this suggestion was sufficiently disposed of by my remark that 'there is no suggestion in the Greek αὐτός of the lowly peasant (αὐτουργός) whom Mr. Taylor connects with "the thought of God humbling Himself in the service of his creatures".'

Mr. Taylor now replies that there is nothing unnatural in his suggestion that Plato could hardly write ἐδημοῦργησεν αὐτός without thinking of the linguistic associations of αὐτουργός, which regularly implies a lowly status, 'a person so utterly insignificant that he could not employ labourers to do his hard work'. He says that my observation was 'magisterial' and should have been given merely as my personal opinion. I am sorry to have left this impression by failing to support my opinion by argument. This I will now add.

Plato can hardly have wished to convey the associations of αὐτουργός, because they are singularly inapposite in a sentence which states that the Demiurge did employ subordinates to do all the rest of his work. To Plato, from the *Phaedo* to the *Laws*, the gods are our masters, we their slaves; whereas the αὐτουργός is not a master, since he cannot afford to have slaves; and,

being a freeman, he does not humble himself to serve anyone. My remark was not based, as Mr. Taylor supposes, on any '*a priori*' theory of what is and what is not Hellenic'. Such a question as this can be settled only by producing evidence that a thought which is certainly not openly expressed in the passage before us might have been in the author's mind because he or some of his predecessors and contemporaries have clearly expressed it elsewhere. No such evidence has been produced. Mr. Taylor can only adduce the comparison, in the *Laws*, of the gods to shepherds who are not too lazy to look after their sheep. But to say that the gods are not indifferent to us, their chattels, and so inferior to good herdsmen and sheepdogs, is not the same as to say that every shepherd must regard himself as the lowly servant of his flock. I think it is not unreasonable to ask for some proof that Mr. Taylor's chain of associations: *αὐτὸς γίγνεται δημουργός—αὐτουργός*—peasant regarded by others as 'lowly'—humble—*humbling himself* to serve others—could have existed in Plato's mind, even if it were not inapposite. To me it seems like arguing that, since a Roman Emperor was called the Father of his Country, and every father loves his children, and to love implies the desire to serve, therefore, Augustus would have welcomed the proudest of all Christian titles, *Servorum*.

I hope I have not lapsed once more into that fault which Matthew Arnold detected in Mr. Spedding, 'a little of that obduracy and over-vehemence in liking and disliking—a remnant, I suppose, of our insular ferocity—to which English criticism is so prone'. Arnold added the noble words: 'It is the critic's first duty—prior even to his duty of stigmatising what is bad—to welcome everything that is good. In welcoming this, he must at all times be ready, like the Christian convert, even to burn what he used to worship, and to worship what he used to burn'. Mr. Taylor has observed this precept in his generous recognition of the good he found in my book. He makes me feel that, like Hamlet, I have been betrayed by that undiscovered complex to which I have confessed. If in shooting arrows over Mr. Taylor's house I have hurt a brother in scholarship, let me plead that Hamlet is of the faction that is wrong'd; his complex is poor Hamlet's enemy.

IV.—PERSUASIVE DEFINITIONS.

BY CHARLES LESLIE STEVENSON.

I.

A "PERSUASIVE" definition is one which gives a new conceptual meaning to a familiar word without substantially changing its emotive meaning, and which is used with the conscious or unconscious purpose of changing, by this means, the direction of people's interests.

The object of this paper is to show that persuasive definitions are often used in philosophy, and that the widespread failure to recognise them for what they are—the temptation to consider them as definitions which merely abbreviate, or which analyse, common concepts—has led to important philosophical confusions.

Before considering philosophical examples, however, it will be helpful to consider some simpler ones, which will serve to make clearer what persuasive definitions are.

As an initial example let us take a definition of the word "culture". It will be convenient to invent pure fictions about the linguistic habits of the people to whom the definition is addressed; for this will typify the actual situation in a way that is free from complicating irrelevancies. Let us consider, then, a hypothetical community in which "culture" began by having an almost purely conceptual meaning. Let us sketch the development of its emotive meaning, show why the emotive meaning led certain people to redefine the word, and examine the way in which this redefinition achieved its purpose.

There was once a community in which "cultured" meant *widely read and acquainted with the arts*.

In the course of time these qualities came into high favour. If one man wanted to pay another a compliment, he would dwell at length upon his culture. It became unnatural to use "culture" in any but a laudatory tone of voice. Those who lacked culture used the word with awe, and those who possessed it used the word with self-satisfaction, or perhaps with careful modesty. In this way the word acquired a strong emotive

meaning. It awakened feelings not only because of its conceptual meaning, but more directly, in its own right; for it recalled the gestures, smiles, and tone of voice which so habitually accompanied it. A public speaker, for instance, was never introduced as "a man widely read and acquainted with the arts". He was described, rather, as "a man of culture". The latter phrase had no different conceptual meaning than the former, but was more suitable for awakening in the audience a favourable attitude.

As the emotive meaning of the word grew more pronounced, the conceptual meaning grew more vague. This was inevitable, for the emotive meaning made the word suitable for use in metaphors. Men who were not cultured, literally, were often called so, particularly when they were admired for having *some* of the defining qualities of "culture". At first people readily distinguished these metaphorical compliments from literal statements; but as the metaphors grew more frequent, the distinction became less clear. People weren't quite sure whether a person *must* know about the arts in order to be literally cultured. Perhaps some other kind of knowledge would serve as a substitute.

Let us now suppose that one member of the community had no wholehearted regard for mere reading, or mere acquaintance with the arts, but valued them only to the extent that they served to develop imaginative sensitivity. He felt that they were not always a reliable means to that end, and on no account the only means. It was his constant source of regret that such mechanical procedures as reading, or visiting museums, should win instant praise, and that sensitivity should scarcely be noticed. For this reason he proceeded to give "culture" a new meaning. "I know", he insisted, "that so and so is widely read, and acquainted with the arts; but what has that to do with culture? The real meaning of 'culture', the true meaning of 'culture', is *imaginative sensitivity*." He persisted in this statement, in spite of the fact that "culture" had never before been used in exactly this sense.

It will now be obvious that this definition was no mere abbreviation; nor was it intended as an analysis of a common concept. Its purpose, rather, was to redirect people's interests. "Culture" had and would continue to have a laudatory emotive meaning. The definition urged people to stop using the laudatory term to refer to reading and the arts, and to use it, instead, to mean imaginative sensitivity. In this manner it sought to place the former qualities in a poor light, and the latter in a fine one, and thus to redirect people's admiration. When people learn to call something by a name rich in pleasant associations,

they more readily admire it ; and when they learn not to call it by such a name, they less readily admire it. The definition made use of this fact. It changed interests by changing names.

—The past history of "culture" facilitated the change. The emotive meaning of the word, it is true, had grown up because of the old conceptual meaning ; but it was now so firmly established that it would persist even though the conceptual meaning were somewhat altered. The old conceptual meaning was easily altered, since it had been made vague by metaphorical usage. The definition could effect a change in conceptual meaning, then, which left the emotive meaning unaltered. Thanks again to vagueness, the change seemed a "natural" one, which, by escaping the attention of the hearers, did not remind them that they were being influenced, and so did not stultify them by making them self-conscious. The effectiveness of the definition lay partly in this, and partly in the fact that it made its results permanent by embedding them in people's very linguistic habits.

The definition may be called "persuasive", then, in a quite conventional sense. Like most persuasive definitions, it was in fact doubly persuasive. It at once dissuaded people from indiscriminately admiring one set of qualities (wide reading and acquaintance with the arts) and induced them to admire another (imaginative sensitivity). The speaker wished to attain both of these ends, and was enabled, by his definition, to work for both at the same time.

There are hundreds of words which, like "culture", have both a vague conceptual meaning and a rich emotive meaning. The conceptual meaning of them all is subject to constant re-definition. The words are prizes which each man seeks to bestow on the qualities of his own choice.

In the nineteenth century, for instance, critics sometimes remarked that Alexander Pope was "not a poet". The foolish reply would be, "It's a mere matter of definition". It is indeed a matter of definition, but not a "mere" one. The word "poet" was used in an extremely narrow sense. This, so far from being idle, had important consequences ; it enabled the critics to deny to Pope a laudatory name, and so to induce people to disregard him. A persuasive definition, tacitly employed, was at work in redirecting interests. Those who wish to decide whether Pope was a poet must decide whether they will yield to the critics' influence—whether they will come to dislike Pope enough to allow him to be deprived of an honorary title. This decision will require a knowledge of Pope's works and a knowledge of

their own minds. Such are the important matters which lie behind the acceptance of the tacitly proposed, narrow definition of "poet". It is not a matter of "merely arbitrary" definition, then, nor is any persuasive definition "merely arbitrary", if this phrase is taken to imply "suitably decided by the flip of a coin".

Persuasive definitions are often recognisable from the words "real" or "true", employed in a metaphorical sense. The speaker in our first example, for instance, was telling us what "real" culture was, as distinct from the "shell" of culture. The following are additional examples: "Charity", in the true sense of the word, means the giving not merely of gold, but of understanding; true love is the communion between minds alone; "Courage", in the true sense, is strength against adverse public opinion. Each of these statements is a way of redirecting interests, by leaving the emotive meaning of the words unchanged, and wedding it to a new conceptual one. Similarly we may speak of the true meaning of "sportsmanship", "genius", "beauty", and so on. Or we may speak of the true meaning of "selfishness" or "hypocrisy", using persuasive definitions of these derogatory terms to blame, rather than to praise. "True", in such contexts, is obviously not used literally. Since people usually accept what they consider true, "true" comes to have the persuasive force of "to be accepted". This force is utilised in the metaphorical expression "true meaning". The hearer is induced to accept the new meaning which the speaker introduces.

Outside the confinements of philosophical theory the importance of persuasive definitions has often been recognised. In philology they receive occasional stress. Or rather, although little attention is given to persuasive definitions, much is said about the broad heading under which a study of them would fall: the interplay between emotive and conceptual meanings in determining linguistic change, and its correlation with interests.

Leonard Bloomfield¹ presents us with a particularly clear example: "The speculative builder has learned to appeal to every weakness, including the sentimentality, of the prospective buyer; he uses the speech forms whose content will turn the hearer in the right direction. In many locutions 'house' is the colorless, and 'home' the sentimental word. Thus the salesman comes to use the word 'home' for an empty shell

¹ *Language* (Henry Holt, N.Y., 1933), p. 442.

that has never been inhabited, and the rest of us follow his style."

Hanns Oertel, having stated that "the emotional element greatly influences the fate of some words", points out that "amica" came to have one sense which was synonymous with "concubina"¹. To be sure there are several reasons for this. "Concubina" had become slightly profane, too strong for delicate ears. And "amica" permitted a convenient ambiguity. Any shocking thoughts could always be ascribed to those who chose to understand the word in its less innocent sense. But a persuasive factor must also have been involved. Tact often required people to refer to concubines without expressing contempt. The word "amica", which retained part of its old laudatory emotive meaning in spite of its new sense, was useful in making concubines appear less contemptible.

Persuasive definitions are too frequently encountered, however, to have been noticed solely by the philologists. An extremely penetrating account, in spite of its cynical turn, is given by Aldous Huxley, in his *Eyeless in Gaza*:

"But if you want to be free, you've got to be a prisoner. It's the condition of freedom—true freedom."

"True freedom!" Anthony repeated in the parody of a clerical voice. "I always love that kind of argument. The contrary of a thing isn't the contrary; oh, dear me, no! It's the thing itself, but as it *truly* is. Ask any die-hard what conservatism is; he'll tell you it's *true* socialism. And the brewer's trade papers; they're full of articles about the beauty of true temperance. Ordinary temperance is just gross refusal to drink; but true temperance, *true* temperance is something much more refined. True temperance is a bottle of claret with each meal and three double whiskies after dinner . . .

"What's in a name?" Anthony went on. "The answer is, practically everything, if the name's a good one. Freedom's a marvellous name. That's why you're so anxious to make use of it. You think that, if you call imprisonment true freedom, people will be attracted to the prison. And the worst of it is you're quite right."

II.

As has been intimated, the study of persuasive definitions falls under a much broader heading: the correlation between terminology and interests. This correlation is highly complicated. A few observations will serve to show that our account of persuasive definitions deals with a severely limited aspect of it.

A change in meaning may be either a cause or an effect of a change in interest; and persuasive definitions figure only when the change in meaning is a cause. When it is an effect, as when

¹ *Lectures on the Study of Language* (Scribner's, N.Y., 1902), pp. 304, 305.

our growing disapproval of present conditions in Germany causes us to use "fascist" as an epithet, there is not in this situation itself any element of persuasion; although once the word has acquired its derogatory associations, it may be used in persuasion later on.

Our subject is still more limited in scope than this. We are concerned with *definitions* which change interests. And it is important to note that we are concerned only with *some* of these definitions. Many definitions which redirect interests are not persuasive. Interests tend to be redirected by *any* definition, so long as it at all changes the meaning of a term, or selects some one sense to the exclusion of others. When a scientist introduces a technical term, in no matter how detached a manner, he indicates his interest in what he names—his estimation of the importance of talking about it, or of predicting its occurrence—and he often leads his readers to have a similar interest. It would be quite misleading to call such definitions "persuasive". How, then, are they to be distinguished from persuasive definitions?

The distinction depends upon whether the term defined has a strong emotive meaning, and upon whether the speaker employs the emotively laden word with dynamic purposes—with the predominating intention of changing people's interests. Men sometimes say, "I do not care what word you use, so long as you make my distinction;" and again, "If you are not interested in my distinction, well and good; I shall confine my remarks to the limited set of people who are". Definitions given in such a spirit are not persuasive; for although they indicate the speaker's interests, and may happen to influence the hearer's interests, they do not utilise emotive meaning in a deliberate effort to sway interests.

Such a distinction is inconveniently stringent, however, and must be slightly qualified. When a definition is given mainly for the purposes of distinction or classification, when it is used to guide only those interests which (like *curiosity*) are involved in making the classification understood, and when it in no way suggests that this is *the one* legitimate sort of classification, then the definition will not be called persuasive. (This is not meant to imply that persuasive definitions are never used in scientific writings, nor that non-persuasive definitions are based on some rock foundation, nor that persuasive definitions are less respectable than others.)

We must now proceed to a further point. Persuasive definitions redirect interests by changing only the conceptual meaning

later change

of an emotively laden term, allowing the emotive meaning to remain roughly constant. Clearly, the opposite change is equally important and prevalent: the emotive meaning may be altered, the conceptual meaning remaining constant. This latter device is no less persuasive. In fact, the same persuasive force can often be obtained either by the one linguistic change or by the other. In our initial example of "culture", for instance, the speaker used a persuasive definition. He might equally well have reiterated statements such as this: "Culture is only fool's gold; the true metal is imaginative sensitivity". This procedure would have permitted "culture" to retain its old conceptual meaning, but would have tended to make its emotive meaning derogatory; and it would have added to the laudatory emotive meaning of "imaginative sensitivity". The same purpose would have been served in this way that was served by the persuasive definition. The qualities commonly referred to by "culture" would still be placed in a poor light, and imaginative sensitivity in a fine one; but this would have been effected by a change in emotive meaning, rather than in conceptual meaning.

Cases of this last sort must be excluded from our account of persuasive definitions. Although persuasive, they are not secured through definition, but rather by one's gestures and tone of voice, or by rhetorical devices such as similes and metaphors. It is expedient to restrict the word "definition" to cases where conceptual meaning alone is being determined, or where, at least, this aspect predominates. We must not forget, however, that many statements which change mainly the emotive meaning of words may, in a wider sense, be called "definitions"; and that they, no less than persuasive definitions in our strict sense, may easily be confused with statements that are not persuasive. (For example: "By 'conscience' is meant the voice of destiny.")

The remarks of the last several pages may be summarised as follows: Persuasive definitions, so far from explaining the whole interrelationship between terminology and interests, deal only with the cases where change in terminology *causes* change in interest, where emotive meaning and dynamic usage are involved, and where the terminological change is in conceptual meaning only.

There is one further clarifying remark that deserves mention. The redirection of people's interests obviously depends upon much more than emotive meaning. It depends as well upon dynamic usage: upon the vigour of the speaker, his gestures, his tone of voice, the cadence of his accompanying sentences, his figures of speech, and so on. It is further conditioned by the



temperament of the hearers, their respect for the speaker, their susceptibility to suggestion, their latent prejudices and ideals—and indeed, by their factual beliefs, for a sudden change in men's beliefs prepares the way (though often with a "lag") for a redirection of interests. Persuasion is seldom effective unless the hearers are already on the point of changing their interests. A persuasive definition may then be important as a final impetus to the change, and as a mnemonic device, imbedded in language, for keeping the change permanent. In dwelling upon definitions, then, and upon the function of emotive meaning, we have stressed but one aspect of persuasive situations. There are excellent reasons for this stress, however. Emotive meaning is a fairly stable element amid the widely varying set of factors upon which effective persuasion depends, and although a partial factor, is often essential. When a man redefines an emotively laden term, moreover, he is *very* frequently endeavouring to persuade, and takes care that the other factors necessary to successful persuasion are fulfilled. Emotive meaning is a reliable *sign* of persuasion—permits it to be noticed. This is important in the case of definitions, where persuasion, however legitimate and vital in itself, can so easily acquire a spurious appeal by masking itself in the guise of a logical analysis.

III.

Having explained what persuasive definitions are, let us now see how they are important to philosophy.

We can readily begin by considering philosophic definitions of the word "philosophy" itself. Ramsey defines it as a system of definitions. Van der Leeuw defines it as an attempt to penetrate behind appearances. Their divergence is no terminological accident. "Philosophy" is a dignified term, and each man reserves it for the inquiry he most wishes to dignify.

Consider the word "Reality". Philosophers often seek not reality, but Reality, or rather, true Reality. But "true Reality", like "true culture", is easily defined in many different ways, with many different persuasive effects. Were the shadows in Plato's cave "real" shadows? Were there "real" shadows of horses and men, as distinct from the imaginary shadows of centaurs? It will not do to express it so. "Real" is too impressive a term to be used in describing shadows and flux; so it must be given a restricted sense which makes it predicable only of the eternal patterns. (When "Reality" is used by the

mystics, the effects of a tacit persuasive definition become even more obvious.)

Why did Spinoza, so anxious to free thinking from anthropomorphism, nevertheless tempt his readers to anthropomorphism by using the word "God"? Why did he not speak always of "The One Substance"? One points, of course, to the political and social forces of the times, which made a semblance of orthodoxy imperative. But assuredly this is not all. The word "God" arouses, as if by magic, the very deepest of feelings. By giving the word a new conceptual meaning, Spinoza was enabled to direct its emotional force away from the old anthropomorphic fictions, and centre it upon Substance, which he so earnestly thought would be a more rewarding object for all our wonder and humility. Had he said, "There is no God; nothing but Substance and its Modes", he would have spoken what he believed, provided "God" was used in the popular sense. But this would have been poor economy of the emotions. It would have taken away the object of men's wonder and humility, providing no substitute; and so these feelings would have died, to the great impoverishment of emotional life. The persuasive definition of a word was needed to preserve emotional vitality. The change in the meaning of "God" was too abrupt, however, to escape notice. Spinoza "the atheist" was long in giving place to Spinoza "the God-intoxicated man"; for the supporters of orthodoxy were not slow to see that his God was God in emotive meaning only.

These remarks are not to be misconstrued as cynical. To point out persuasion is not necessarily to condemn it, nor to identify all persuasion with that of a mob-orator. It is imperative, however, to distinguish between persuasion and rational demonstration.

Let us now proceed to a more recent issue. Positivism achieved its wide appeal before Carnap's "principle of tolerance", and achieved it largely through the statement, "Metaphysics is without meaning". But isn't this remark surprisingly like that of the nineteenth-century critics, who said that Pope was "not a poet"? The Positivists were stating an unquestionable truth, in their sense of "meaning", just as the nineteenth-century critics were, in their sense of "poet". The truth of such statements, however, is utterly beside the point. Controversy hinges on the emotive words that are used. Shall we define "meaning" narrowly, so that science alone will receive this laudatory title, and metaphysics the correspondingly derogatory one of "non-sense"? Shall our terminology show science in a fine light,

yes!

and metaphysics in a poor one? Shall we, in short, accept this *persuasive* definition of "meaning"? This is the question, though well concealed by the dictum that definitions are "merely arbitrary".

But this conclusion deserves careful qualification. We must remember that the nineteenth-century critics, to return to the analogy, were not condemning Pope with sheer bombast. They were also making a distinction. Their narrow sense of "poet" had the function of stressing, in the reader's attention, certain features common to most poetry, but lacking in Pope's. Perhaps they meant to say this: "We have long been blind to fundamental differences between Pope's work and that of a Shakespeare or Milton. It is because of this blindness alone that we have been content to give Pope a laudatory title. Let us note the difference, then, and deprive him of the title." The contention of the Positivists will easily bear the same interpretation. Perhaps they meant to say: "We have long been blind to the fundamental differences between the use of sentences in science and their use in metaphysics. It is because of this blindness alone that we have been content to dignify metaphysics with such titles as 'meaningful'. Let us define 'meaning', then, in a way that will at once stress these fundamental differences, and deprive metaphysics of its title." When thus stated the Positivistic thesis has not only heat, but light, and is not to be scorned. And yet, perhaps there is still too much heat for the amount of light. It is of no little service to stress the ways in which metaphysics has been confused with science; and to the extent that Positivists have done this, their "conquest of metaphysics" has not depended upon exhortation. But do their distinctions take us more than *half way* to a full rejection of metaphysics? Are we led to go the other half by the word "nonsense", defined so that it may cast its objectionable emotive meaning upon metaphysics, without being predicated of it untruthfully?

The same question arises even when metaphysics is denied "cognitive" meaning only. "Cognitive" is used to mean "empirically verifiable or else analytic", and with exclusive laudatory import. Hence the Positivistic contention reduces to this: "Metaphysical statements are neither empirically verifiable nor analytic; hence they are not respectable." If metaphysicians answer, "Our statements, even though neither empirically verifiable nor analytic, are still respectable", they are scarcely to be led away from their position by mere exhortation.

Metaphysical impulses are too strong for hortatory treatment;

cf. Auer
Nelson
366
not used in book

they are inhibited by it without being removed. If metaphysics is wholly to give place to science in our esteem, this can come only from a closer scrutiny of both metaphysics and science. Inquiries into verification and syntax make a good beginning, but they are not the only points for study. It would be well to consider how words which suggest graphic images and metaphors are used in the sciences, and contrast their function there with their function in metaphysics; or to examine the psychological needs and specific confusions which lead people to think that metaphysics is necessary. Such inquiries would direct our attitudes toward metaphysics in a more permanent and illuminating fashion; they would shape our attitudes by clarifying and augmenting our beliefs. If an adverse attitude to metaphysics were prepared for in this manner, the word "nonsense", persuasively defined, would be helpful in crystallising the attitude. Such a programme seems more promising than that of the metaphysicians. It is a pity, then, to hide its real complexity by using a persuasive definition prematurely.

IV.

Let us now turn to ethics, with particular attention to the word "justice", as defined in Plato's *Republic*.

The first book of the *Republic*, it will be remembered, is largely taken up with an argument between Socrates and Thrasymachus. Socrates is the victor, and yet he is not content. "I have gone from one subject to another", he says, "without having discovered what I sought first, the nature of justice. I left that inquiry and turned away to consider whether justice is virtue and wisdom, or evil and folly." (354, Jowett.)

Was this argument about the "virtue or evil" of justice really an unwarranted digression? In the light of our previous discussion, we cannot agree that it was. The argument had the important function of determining whether or not "justice" was to retain its laudatory emotive meaning; and this was essential to the subsequent developments of the dialogue. When a man is about to give a persuasive definition (and we shall see in a moment that Socrates was) he must make sure that the emotive meaning of the term defined is well established. Otherwise a definition which was intended to illuminate a conceptual meaning under a laudatory title will end by obscuring it under a derogatory one. The word "justice", which is a little too stern to be wholly pleasing, is in danger of becoming derogatory, and particularly so when men like Thrasymachus (with a

Bled

persuasive technique like that mentioned on page 337 above) are using their oratorical ability to *make* the word derogatory. Socrates must praise justice, then, before he defines "justice".

The question about the meaning of "justice" reappears in the fourth book. The two intervening books have redirected our interests by a moving description of the ideal state. These new interests must be rendered permanent. This can be done by dignifying the more significant aspects of the state under laudatory titles. Of the four laudatory terms which Socrates mentions, "wisdom", "courage", "temperance", and "justice", the first three are readily made to serve this purpose, without great change in their conceptual meaning. The remaining term must be reserved for whatever else needs dignity. And so the definition of "justice" is found. "Justice of the state consists of each of the three classes doing the work of its own class." (441).

The persuasive character of this definition—the fact that it forms a part of a spirited plea for a new class system, a beautiful and inspired kind of aristocratic propaganda—can scarcely be denied. The usual meanings of "justice" must give place to the "true" one, to the meaning which needs the dignity of a laudatory name.

This account would strike Plato as decidedly unfamiliar. Yet he would disagree with it much less fundamentally than may at first appear. Let us follow his own account, stressing such points as bear analogy to the present one.

Plato would have agreed that the usual meaning of "justice" was only a point for departure. We must fashion our definition not after the common conception of justice, but after justice itself—after the eternal Idea of justice, which we have beheld in a life before birth, and can now know only through careful *recollection*. A definition based on common usage would disclose merely the imperfect recollection of the Idea, as grasped by men bound to the world of opinion.

This point of agreement seems slight, and outweighed by the theory of recollection. But let us look more closely. How did Plato decide whether his recollection was correct? Did he consider it correct when he reached a conception which satisfied his deepest, inmost aspirations? Did the dialectical method serve only to clarify his mind, so that his aspirations could be directed to something articulate? It is difficult to think of any other answer. Plato aspired to the Ideas; but this was not a consequence of some miraculous power of attraction which the Ideas possessed. It was a matter of analytic necessity. Any-

thing which was not an object of his aspirations was not called an Idea. If this is so, then our account is again close to his. If he had consciously been making a persuasive definition, he would still have selected, as the conceptual meaning of "justice", the object of these same aspirations. Nothing else would have been granted the laudatory name. We have retained the factors which led Plato to make his definition, without retaining the poetic realm of the Ideas, whose function, indeed, was only to adorn his procedure, not to alter its outcome.

If Plato's work had been less Utopian, more satirical, he would have had recollections not from one realm of Ideas, but from two. The first realm would have been the dwelling-place of the gods, as described in the *Phaedrus*; and the second the dwelling-place of the "author of evil" who makes his unexpected appearance in the tenth book of the *Laws*. Just as aspirations would be the criteria for correct recollection from the first realm, so aversions would be the criteria for correct recollection from the second. The theory of definition would then be less closely confined to the laudatory terms. Recollection could function likewise for the derogatory ones. But it would be of vital importance, in defining the derogatory terms, to confine the recollection to the second realm. The most serious philosophical errors would come from a failure to recollect from the "correct" realm, where the correctness of the realm would depend on the emotive meaning of the term defined.

We must return, however, to the definition of "justice". Plato's definition was persuasive; but this is far from being exceptional. Later definitions of "justice", with but few exceptions, are equally persuasive. They exert a different kind of influence, of course. Not all philosophers are aristocrats. But they do exert an influence.

Let us consider Bentham's definition. "'Justice', in the only sense which has meaning [!], is an imaginary personage, feigned for the convenience of discourse, whose dictates are the dictates of utility, applied to certain particular cases."¹ More simply stated, "This is a just law" is a hypostatic way of saying, "This law contributes to the greatest happiness of the greatest number". Such a definition may not immediately strike us as being persuasive, since so many of us are willing to be led in its direction. Yet its stress on mere numbers, its stress on counting the poor man's happiness side by side with the rich man's, clearly marks a plea for greater democracy. The definition propagated the ideals of a great Liberal.

¹ *Principles of Morals and Legislation*, 1789, ch. x, sect. xl, n. 2.

By a "just" wage for labourers, it may be suggested, is meant the wage that anticipates what labourers would get eventually, through operation of the laws of supply and demand, if only there were a perfect market in the economic sense. This definition conceals its persuasion quite well, making it seem to have the detachment of a purely scientific economics. But it is a plea, though slightly compromised, for the operation not of economic laws, but of "natural" economic laws—that is to say, for the operation of economic laws as they *could* be stated if the purely competitive, "devil take the hindmost", aspects of industry were guaranteed. So you will find this definition more pleasing to those who thrive under the present industrial conditions than to those who do not.

4 "Justice" can be defined in a great many ways, always without shocking the lexicographers. An eye for an eye, and a tooth for a tooth? The keeping of contracts, merely? The king's will? The distribution of social wealth in accordance with the amount of *labour* that each man does? We have a wide choice of meanings, and freedom, within wide conventional limits, to invent new ones. Which meaning we choose, however, is no trivial matter; for we shall dignify that meaning by a laudatory title. To choose a meaning is to take sides in a social struggle.

It is curious to note that theorists have all been perturbed by the uncertainty of ethics, and have caught glimpses, even in moments of philosophical calm, of the element of persuasion involved. They sought to avoid this by defining their terms, hoping to give greater rigour and rationality to their inquiries. Yet, ironically enough, these very definitions involved the same persuasion; and in a way that veiled and confused it, by making it appear to be purely intellectual analysis.

V.

) The examples we have considered, whether from metaphysics, theology, epistemology, or ethics, indicate that persuasive definitions are far from rare in philosophy, and that failure to recognise their persuasive character has been responsible for much confusion. But what, essentially, is the nature of this confusion? Largely this: Blindness to persuasion has fostered a misunderstanding of the *kind of disagreement* that motivates many disputes; and in consequence has led people to support their contentions by far too simple a *method*, or to seek a definitive method of proof where none is possible.

These methodological confusions have so far been evident only by implication, and must now be treated more explicitly. Let us proceed by indicating the *actual* complexity in methodology which persuasive definitions introduce; for the extent to which this complexity has been overlooked will then become obvious, without further mention. It will be convenient to confine our attention to the example of "justice"; but it must be remembered, of course, that the same considerations arise for any case which involves a term that is subject to persuasive definition.

The summary of methodology will be parallel to that given in a previous paper.¹ The pattern of analysis there exemplified by "good", however, is slightly different from the one here exemplified by "justice". The same methodological considerations reappear, but we must recognise them in their new guise, and amid additional complications.

Two men disagree about whether a certain law is just. Let us examine the several forms which their argument may take.

(1) Suppose that both men use "just" with the same conceptual meaning, namely: *leading to consequences A and B*. The argument may then be resolved by use of the empirical method. The disputants have only to see whether the law in question leads to these consequences.

This simple case is seldom found, however. We have seen that "justice" is constantly subject to persuasive definition, with the result that different people come to use it in different senses.

(2) Suppose, then, that the first man uses "just" to refer to A and B, and the second man uses it to refer to B and C. Suppose further that B is the only point of disagreement. In this case the disputants will probably proceed without noticing the discrepancy in their terminology, and will again find the empirical method adequate. The outcome of the argument will depend upon whether the law is or is not found to lead to B.

(3) Let us next make the same supposition as immediately above, save that C, rather than B, is the sole point of disagreement. The discrepancy in terminology will then probably be realised. Yet the argument may proceed, and in some cases may be settled empirically. If the second man, who uses "just" to refer to B and C, is the one who denies the justice of the law, his opponent may refute him by showing empirically that the law does lead to C. (B is already agreed upon, by hypothesis.) "You are

¹ "The Emotive Meaning of Ethical Terms", MIND, vol. xlvi, N.S., No. 181.

refuted", the first man will say, "even according to your own faulty conception of justice."

This case raises a point which demands particular attention. The first disputant did not refer to C, in his initial statement, and the second disputant denied the justice of the law on account of C alone. Hence the initial statement of the first man was at no time contradicted by his opponent. Yet the first man will feel, even after the discrepancy in terminology is clearly realised, that he has been opposed from the very beginning. He will feel the need of refuting his opponent's statement, as though this were necessary to support his own. Why is this the case?

This question seems puzzling only because we have attended exclusively to conceptual meaning. We have been tacitly assuming that the disputants were pure scientists, motivated by a detached curiosity. If our example is to be typical of the majority of actual ones, this assumption is wholly unwarranted. The use of "just" and "unjust" clearly indicated that one disputant was *for* the law, and the other *against* it. They argued for this reason, not because they were statistically minded. They were *disagreeing in interest*. Each had a different kind of interest in the law, and neither was content to let the other's interest remain unchanged.¹ This kind of disagreement is evident more from emotive meaning than from conceptual meaning. The fact, then, that the conceptual meaning of the first disputant was not contradicted did not lead him to feel that his position was unchallenged. He wanted his opponent not merely to acknowledge certain consequences of the law, but likewise to praise it; and his opponent would not be praising it if he called it "unjust", no matter what conceptual meaning he assigned to the term.

The disagreement in interest is most easily seen in cases like (3), but a moment's consideration will show that it is equally present in cases (1) and (2). The use of the laudatory term "just" in the earlier cases indicated that they too were concerned with whether or not the law was to be favoured. A, B, and C were involved, of course, but no more so than in the third case, and they were relevant for the same reason—relevant because the disagreement in interest, which motivated the argument, was rooted in a disagreement in belief. In other words, the disputants would have the same kind of interest in the law if only they resolved their opposing beliefs about these consequences of it. In the first cases these opposing beliefs were about conse-

¹ For a fuller analysis of disagreement in interest, see *MIND*, vol. xlv, N.S., No. 181, p. 27.

quences which *both* disputants referred to conceptually by the word "just". In the third case they were about something which only one referred to by "just". This is the main point of difference between the cases, and it is unimportant. The disagreement was of a sort that would terminate only when both disputants had the same kind of interest in the law. Beliefs were relevant only to the extent that they redirected interests. Which beliefs did so, and whether they were expressed in the initial statements of both opponents, determined merely the complexity of the argument, and not its fundamental character.

These remarks prepare us for a further case :

(4) Suppose, as before, that the first man uses "just" to refer to A and B, and the second man (who denies the justice of the law) uses "just" to refer to B and C. Suppose further that both have fully established that the law does lead to A and B, and that it does not lead to C. Conceptually speaking, of course, they have as yet located no point of disagreement, nor is there the possibility, as in (3), of one man's refuting the other "even according to the opponent's faulty conception of justice". Yet they may still argue about the justice of the law. The laudatory force of "just", and the derogatory force of "unjust", are still indicative of a disagreement in interest.

With regard to methodology this case is of particular importance. It represents a disagreement which the *empirical method* may be wholly incapable of resolving.

This will be clear if we again consider, at the expense of partial repetition, why the empirical method *was* decisive in the first three cases. In each of the earlier cases the initial judgment of one disputant was false. This was guaranteed either by the law of contradiction or by explicit hypothesis. Each disputant, moreover, would have had a favourable interest in the law only so long as he believed that "just", in his sense, was truthfully predicable of it; for otherwise he would have used the laudatory term in a different conceptual sense. For these reasons the disputants had only to look to the truth of their initial statements, and this would lead them to have the same kind of interest in the law. In short, the disagreement in interest, which was the mainspring of the argument, was rooted in a disagreement in belief—in some belief which at least one of the opponents had falsely expressed in his initial statement. The empirical method, by upsetting this belief, would likewise resolve the disagreement in interest.

In case (4), however, the initial statements of the opponents are both true. The men are disposed, as above, to favour or

disfavour the law in accordance with whether "just" and "unjust", in the disparate senses which they employ, are truthfully predicable of it; but an empirical inquiry will serve to *support both* of their statements. Hence the first man will continue to call the law "just", with favour; and the second "unjust", with disfavour. Their disagreement is not rooted in some belief which either is expressing, and may be due solely to their different temperaments. Since the empirical method alters interests only through altering beliefs, how can it be used to resolve this disagreement?

It is immediately clear that the empirical method has not the same direct application, in (4), that it had in the earlier cases. Yet we shall conclude too hastily if we say that there is no room for it here at all. Let us examine further.

If case (4) continues to be disputed, persuasive definitions, which hitherto have been responsible only for the ambiguity of "just", will come to play a more overt and important rôle. Each man, in order to influence the other's interests, will insist upon his own definition. They will argue about whether the law is just in the *true* sense of "just". Until they agree upon the sense of the word they will not agree upon their fundamental issue, namely: whether the law is to be described by a name that indicates their praise.

The empirical method, however unavailing it may be in altering the truth of the conceptual predications which the disputants first made, may reappear as a means of supporting their persuasive definitions. The second disputant, for instance, may be led to discover that C, to which he refers by "just", has the further consequences, F, G, and H. If he has an unfavourable interest in these consequences, he may no longer wish to define "just" in terms of C. If he is led to discover that A has the further consequences I, J, and K, in which he has a favourable interest, he may decide to use "just" to refer to A. In other words, he may accept the definition upon which his opponent has been insisting. Both men will then come to agree that the law is just in a mutually accepted sense of "just". This sense will be a product of their wider empirical knowledge, and it will terminate their argument not merely because they both believe that it is truthfully predicable of the law, but because their mutual acceptance of it indicates that they no longer disagree in interest, but both favour the law.

The argument in case (4) may be resolved, then, in an empirical fashion; but we must remember that it also may not. Even if the disputants know all the relevant consequences of the law,

one of them may still wish to praise it, and the other to condemn it. They will be led to no common conceptual sense of "just", and although neither man need be stating anything false about the law, they will continue to disagree about its justice. The disagreement will be one in interest, not rooted in any sort of disagreement in belief. If resolved at all it will be resolved only by exhortation.

It is a general truth that the empirical method can resolve ethical disagreement, or any other kind of disagreement in interest, only when this is rooted in a disagreement in belief. The present outline of methodology has become complicated only with regard to *which* beliefs are at the root of the disagreement in interest—whether there are any, and if so, to what extent they are expressed in the initial judgments. Such considerations are essential in clarifying the nature of the argument, but they are of no additional importance. This is obvious from the fact that arguments of this sort spring from the emotive meaning of the initial judgments, more than from the conceptual meaning. It is evident from a further consideration: In actual practice "just" is used so vaguely that neither disputant will be sure which consequences are included in the definition of "just", and which psychologically guide him to make this definition.

The present pattern of analysis is conveniently applicable to all of the more specific ethical terms, and likewise to "beautiful". The pattern of analysis exemplified elsewhere by "good"¹ is conveniently applicable only to the more generic ethical terms. (It does not provide any ready means of indicating *differentiae*.) But which of these patterns of analysis we select for any ethical term is largely a matter of technical convenience. "Just" could perhaps be treated after the manner of "good", and distinguished from "good" by the kind of interest involved—though present psychological terminology does not provide a means of making the distinction accurately. "Good" could doubtless be treated after the manner of "just". Moritz Schlick made a beginning of this,² but his failure to stress disagreement in interest, and all that it implies, largely vitiates his account. The same may be said, although with several qualifications, of the original account given by Ogden and Richards,³ and of the account given by C. D. Broad.⁴

¹ MIND, vol. xlv, N.S., No. 181.

² *Fragen der Ethik* (J. Springer, Vienna, 1930), ch. i.

³ *The Meaning of Meaning* (Kegan Paul, 1927), p. 149.

⁴ "Is Goodness the Name of a Simple, Non-natural Quality?" *Proceedings of the Aristotelian Society*, 1933-34.

The ethical terms are used so vaguely that many different patterns of analysis are relevant to the conventional usage. It is idle to select some one of these as *the* pattern of analysis. All that is required is that the analysis clarify, whether in one way or another, the essential features of ethical arguments. These are emotive meaning, dynamic usage, disagreement in interest, and an important but not definitive rôle for the empirical method.

V.—DISCUSSIONS.

NAÏVE REALISM AND A PASSAGE IN THE THEAETETUS.

DISPUTES about the meaning of terms are not always profitable, but sometimes a term or title imports a special assumption into the body of a theory. And then it becomes particularly important to consider the propriety of employing such a term in that reference. This seems to me to be particularly the case with regard to the title 'Naïve Realism'.

The term indubitably tends to suggest that the theory so designated conforms very closely to the assumptions of ordinary thought. But it is not easy to determine how far such a theory has a title to any special respect. There seems to be at least a legitimate presumption that it rests on *some* outstanding aspect of the experience of perception—a not inconsiderable merit in view of the extravagant theories put forward by writers who are more at home in physics than in philosophy. But it would still remain to consider how far the theory succeeds in accounting for *all* the data furnished by the experience of perception. And in the main, in philosophical controversy, the value of the appeal to the 'ordinary' or 'vulgar' man appears to have been exaggerated. This is especially the case in ethics where so many alien influences affect our beliefs and confuse our expression of them. The 'vulgar' man is an oracle that is easily 'worked' where moral conceptions are concerned. But while taste and moral sense require to be educated, and vary with a number of subjective factors, ordinary thought about sensible reality is related in a more immediate and regular way to experience itself, and might therefore serve as a useful check upon the more systematic reflection of philosophy. In any case, whatever be the final significance of the conformity of a theory to the assumptions of ordinary thought, a considerable amount of confusion is avoided by making quite certain to what extent the claim of a theory to such conformity is well-founded.

What then is it that the ordinary man believes about the sensible world? Clearly he believes that objects 'are there' independently alike of his mind and his body. But of the difficulties which confront us in this belief, in view of illusions and variations in the appearance of objects, he is totally unaware. At most he is content to say, *e.g.*, that the ship *looks* small when seen from a distance. In what sense we can be said to be seeing the same ship as the sailors on

board he does not pause to consider. The sensible world is so excellently adapted to the purpose of living in it that the majority of men pass their lives without realizing that there is such a problem. This attitude is helped out by the fact that we do not, in ordinary thought, make a conscious distinction between mental image and meaning. The distinction is indeed fundamental to thought at all times, but reflection upon it is rare. Accordingly we tend to think of objects as conforming actually to the image we happen to have of them at the time, the image being itself determined by the context in which we think of the object, *i.e.* I shall have a different image of Snowdon according as I am actually seeing it, thinking of myself climbing the mountain, or thinking of myself viewing it from Caernarvon. What we mean by Snowdon is never the image; but the fact that I give no thought to the appearances or the memory-images which are not now present to me, obscures the conflict between them and the present appearance or memory-image: and, in consequence, the distinction between the object itself and any of its appearances is rarely brought into explicit consciousness. Thus it is that ordinary thought is not often disturbed in its belief that objects 'are there' independently of us.

But this unreflective belief has little affinity with the theory which goes by the name of Naïve Realism. In terms of that theory it has to be supposed that sense-data are parts of the surface of entities that exist independently of our experience.¹ And it needs little reflection on the implications of this supposition to realize that it involves considerable distortion of our ordinary beliefs about the sensible world. Thus, *e.g.* it is implied that what we see through coloured glass, or from a distance, is as independent of our experience as objects seen normally or near at hand. And this is certainly foreign to ordinary thought. The ordinary man thinks that, while he is seeing the real object through the coloured glass, he is seeing it in a form which is not its real form. He does not suppose that there is an object which has the peculiar colour present to him under such conditions. On the contrary he regards that colour as relative to the conditions of that experience and having no existence independently of it. How an object can *look*, *e.g.*, red and *be* another colour, and what is meant by *looking* in such statements, he does not, as I noticed, enquire, because he does not reflect sufficiently on his attitude to realize its difficulties and its peculiarity. But he is certain that the object merely *looks* red. It cannot *be* red to me and blue to another.

¹ This definition will perhaps benefit by the support of a quotation. The following statement appears on p. 8 of the essay on *The Approach to Critical Realism* by Durant Drake in *Essays in Critical Realism*. "... let us examine naïve realism. We must admit at once that it is *a priori* conceivable that our perceptual data are actually portions of external existences, slices or surfaces of the physical objects about us."

Cp. H. H. Price, *Perception*, p. 55 "the Naïve Realist thesis that visual and tactual sense-data are parts of the surfaces of material objects".

One colour is independent and real while the other is relative, transitory, and unreal.

And when it is sought to meet the difficulties of Naïve Realism by regarding an object as a group of sensibilia which persist independently of an experient,¹ it will be obvious that we have travelled very far from ordinary thought. The attitude which finds nothing peculiar in the supposition that we hear faintly from a distance the loud sound which a waterfall has near at hand will certainly not accommodate itself easily to the description of the waterfall as an "infinitely numerous group of sounds, each having its own degree of loudness"² and each equally independent of a listener. Indeed, the view that along with the sounds and colours which an object reveals to us under certain conditions, there persist 'infinitely numerous' other sounds and colours which it would reveal to us under different conditions will, probably, remain rather odd, whether or not it is true, to the most habituated student of perception. And even if it is the case, as some would hold, that this takes us beyond Naïve Realism, as the most obvious way of meeting the difficulties of that theory, it emphasizes its peculiarly sophisticated nature. In short, Naïve Realism is seen to be the reverse of naïve.

Finally, when common sense is induced to take cognizance of the facts of illusion and perspective and becomes aware, accordingly, of the difficulties involved in its assumptions, the normal reaction tends in the way of subjective idealism. The history of philosophy, and especially of modern philosophy, with its more instructed grasp of the problems of perception, in the main, testifies to this. But final confirmation is to be sought in observations of the reactions of ordinary men, especially the systematic observation of experiment. Even where it proves difficult to shake the conviction that objects 'are there,' etc., there will result a more definite insistence that, *e.g.* where one colour is real a host of others are mere appearances. It will be particularly hard to win serious consideration for the view that all appearances are equally independent.

¹ Note the following passage from the essay by Durant Drake to which I have already referred, p. 10. "Every change in sense-organ or brain-event enables a perceiver to become aware of some new one of the myriad qualities of the spatial object, and requires it to exclude all the other qualities that are there, some of which other fields of consciousness may be simultaneously including. To say that the tree is green or beautiful "for me" means simply that the green quality really exists all the time out there in the tree, within my field of consciousness, but not within my colour-blind neighbour's field, which instead includes the grey quality, equally existing out there, which keeps out of my field. Our respective mechanisms of perception are differently selective". Compare the famous paper by T. P. Nunn published in the *Proceedings of the Aristotelian Society*, 1909-1910; see especially p. 204.

² H. H. Price, *Perception*, p. 45.

These contentions will probably find very general acceptance to-day. The difference between the theory Naïve Realism and the naïve realism which is identical with the attitude of the ordinary man towards sensible reality has been made abundantly clear in recent writings. But it does not seem that the importance of the point has been sufficiently emphasised. And the main purpose of this note is to illustrate, by reference to an interesting dispute with regard to a passage in Plato, how misleading it may prove to identify Naïve Realism, as it appears in any explicit theory of perception, with our unreflective attitude towards the sensible world.

The passage is Theaetetus 152. A reference is made to the theory of Protagoras that 'man is the measure of all things'. As regards perception this is seen to imply, *e.g.* that the wind is hot to him who feels it hot, cool for him who feels it cool. And this position is immediately shown to involve the thorough-going relativity of the Heraclitian theory of flux. So developed the position presents no particular difficulty and we have little doubt that it was the view accepted by Plato himself with regard to sensation, whether or not it was initiated by him. In terms of this position sensations will be fleeting and transitory and, while not strictly subjective, the experient alone will have access to them because they have no reality out of relation to him. But how is this position connected with the theory originally ascribed to Protagoras himself? Is Plato merely developing the Protagorean theory? Is he, in the terms of A. E. Taylor,¹ expounding the 'ontology' which the merely 'epistemological' contention of Protagoras requires? Or is he substantially modifying the latter?

On the view of Prof. Taylor² we have to suppose that Plato ascribes to Protagoras a theory of 'private worlds'. "Protagoras denies that there is a common real world which can be known by two percipients. Reality itself is individual in the sense that I live in a private world known only to me, you in another private world known only to you . . . Protagoras is not denying the genuine objectivity of each man's private world; his equation of 'appears to me' with 'is, is real to me' is meant to insist on this objectivity. But he denies the reality of the 'common environment' presupposed by 'intra-subjective intercourse'". And the subsequent argument is intended to show why the perceived world "is necessarily a private world". But F. M. Cornford in a recent commentary³ disputes this interpretation and ascribes to Protagoras a view which has an obvious affinity with recent developments of the doctrine Naïve Realism. On his view, "'the wind is cold to me' means that the cold is the property that appears to or affects me, though it is not the property that appears to or affects you. To say simply that 'the wind is cold' would naturally be taken to imply that it was not warm. But in fact it is both".

¹ Plato, p. 329.

² *Op. cit.*, 326.

³ For all ref. to Cornford, see *Plato's Theory of Knowledge*, pp. 34-35.

Two main arguments are brought forward in support of this interpretation. (1) We are reminded that the Ionian tradition maintained that the senses were to be trusted and that things were mixtures of the opposites apprehended by sense. The Eleatics denied this and Protagoras is regarded as "replying to the Eleatic denial of appearance". A reference is also made to his contemporary Anaxagoras. How far Anaxagoras held the 'coexistence of opposites' in the sense required for Cornford's present contention I cannot enquire in detail here, and in the last analysis I should have to defer to eminent scholars. But it seems pertinent to note that the argument of Anaxagoras to which reference is explicitly made, namely that 'we become aware of the hot by means of the cold,' etc., could be regarded as supporting a view of 'co-existence' not substantially different from the theory of sensation expounded at large in the *Theaetetus*. It does not, so obviously, at any rate, suggest the literal co-existence of opposites. But whether a similar attitude can be adopted with regard to all the features of the Ionian belief in co-existence is more doubtful. And the point can hardly be considered with profit in a brief space.

It is the second argument that concerns us closely here. We are told (2) with regard to the view of Prof. Taylor that "this interpretation seems to me much too advanced for Protagoras's date". By contrast with this the view attributed to Protagoras here by Prof. Cornford himself "has not broken with the naïve realism of common sense, which does not doubt that objects have the qualities we perceive". Now as regards common sense this statement is perfectly true. But it seems illegitimate to infer from this that common sense gives countenance to any theory of the co-existence of opposites. As was observed, common sense is assured that objects have the qualities we perceive because it has never reflected on its attitude and is totally unaware of the implications of such a belief. And in so far as a clue to the meaning of Protagoras is to be sought in the closeness of his position, in the development of reflection, to ordinary thought, the highly sophisticated nature of a theory of the co-existence of opposites, as is evidenced especially in its modern analogue which supposes the existence of infinitely numerous sounds and colours, etc., where we normally think of one, favours the ascription to him of the alternative and, as it seems to me, simpler theory of private worlds. This is not conclusive where the final interpretation of Protagoras is concerned, but it seems conclusive as regards the present argument of Cornford. The caution against putting forward a view "too advanced for Protagoras's date" defeats the purpose for which it was intended and weakens considerably the plausibility which Cornford's interpretation acquires on account of his earlier argument. How the early Greek thinkers came to believe in 'co-existence of opposites', is, if I am justified in my contention in earlier passages, a particularly baffling problem. I can only suggest that we may be interpreting them too

literally, and that their theory was of a more general character than appears at first sight, and not properly related to problems of perception. Since Protagoras had a surer insight into the precise nature of the problem of perception than his contemporaries, as is implied especially in his maxim 'Man is the measure', in its reference to perception, whether or not that maxim is true, we have justification for equating him with 'the ordinary man' when he is set seriously to reflect on the difficulties of his beliefs and tends, according to my former assertion, in the direction of subjective idealism.

In connection with the question of interpretation it may be urged, finally, that the doctrine of Naïve Realism, or any alternative to the theory of 'private worlds' resembling Naïve Realism, to be at all plausible, would have to suppose the existence of qualities never actually perceived. It would be strange beyond all credibility if the qualities we perceived were in no way bound up with ourselves and if different persons perceived different qualities while, at the same time, there were no quality unperceived. But the position of Protagoras is not easily squared with the existence of anything that is unperceived. According to the account of his view given in the *Theaetetus* "Man is the measure of all things, of the existence of things that are and the non-existence of things that are not". And Cornford himself quotes with approval the account of Protagoras's view given by Sextus as thus, "So man proves, according to him, to be the criterion of what exists; everything that appears to man also exists: *What appears to no man does not exist*".

But here I am beginning to be tempted beyond the minimum requirements of this note.

H. D. LEWIS.

THE NULL CLASS OF PREMISES.

THE construction of a set K of postulates for a calculus Σ , such for example as that occurring in the first five numbers of *Principia Mathematica*, gives rise to a number of important problems. One of these relates to whether the members of K , to be called "K-postulates", are independent, i.e. whether they satisfy

$$(\gamma) \quad p, q \in K \cdot \supset \cdot \sim (p \supset q \cdot \vee \cdot q \supset p).$$

Given that K forms both a consistent and a complete set of postulates for Σ , the further requirement that the K-postulates also satisfy (γ) is a requirement that K form a *minimum* set of postulates for deriving all the theorems in Σ . In general, the problem whether (γ) holds for K is equivalent to the problem whether the number of K-primitives can be "reduced". That K satisfy (γ) is primarily a requirement of elegance, since if the K-postulates do not constitute an independent set their combined deductive force will not thereby be decreased, i.e. they could still form a complete set even though not an independent one. Thus, for example, the single Nicod postulate or the various Bernays¹ reduced sets of postulates have no greater deductive force than do the five primitives of the *Principia* calculus of elementary propositions.

In connection with condition (γ) it is interesting, and I think also curious, to note that Prof. Carnap, in order, seemingly, to insure an absolute minimum of K-postulates, and thereby of course to insure an absolute maximum of elegance for K , outdoes even Nicod by resorting to the heroic course of dispensing altogether with primitives for Σ . He assumes a set of postulates, for the *Principia* calculus of elementary propositions, which constitutes the absolutely minimum set of *zero* postulates. To quote Prof. Carnap on this point:

'It is to be noted that an axiom or primitive sentence of a language can also be stated in the form of a rule of inference, and therefore also in the form of a part of the definition of "direct consequence". The difference is only that in this case the class of premises is the null class (i.e. the class which has no members). Thus instead of ruling: "' $p \supset \cdot p \vee q$ ' is to be a primitive sentence of the language S ", we may say: "' $p \supset \cdot p \vee q$ ' is to be a direct consequence of the null class

¹P. Bernays, "Axiomatische Untersuchung des Aussagen-kalküls der *Principia Mathematica*", *Mathematische Zeitschrift*, Vol. 25 (1926), pp. 303-321.

of premises" . . .¹ 'Now a primitive sentence is a direct consequence of the null class of premises. Therefore a proof in the *Principia Mathematica* is a chain of direct consequences beginning with the null class of sentences and ending with the sentence proved.'²

In other words, Prof. Carnap assumes a set K' of primitives, by the use of which the five primitives of *Principia*, as well as the single Nicod postulate and those of the various reduced sets, can be derived as consequences. The set K' which he assumes is the null class of premises, symbolized " Λ ", which can be defined in various ways, for instance, as the class of sentences now being thought of by Mark Anthony. And it is readily seen, for example, that the *Principia* primitive $p \vee p \cdot \supset \cdot p$ is a consequence, not, as Prof. Carnap states, of the null class of premises, but of the *premises* belonging to the null class Λ , i.e. of the Λ -premises:

$$(a) \quad (q) \cdot q \in \Lambda \cdot \supset \cdot (q \cdot \supset \cdot p \vee p \cdot \supset \cdot p).$$

This, (a), can more readily be seen to be the case by inspecting its equivalent

$$(a') \quad \sim (\exists q) \cdot q \in \Lambda \cdot \sim (q \cdot \supset \cdot p \vee p \cdot \supset \cdot p),$$

which is true because

$$\sim (\exists q) \cdot q \in \Lambda$$

is true.

For his Λ -postulates Prof. Carnap can easily prove consistency, completeness, and independence:

$$(\alpha), \quad (p, q) \cdot p, q \in \Lambda \cdot \supset \cdot \sim (p \supset \sim q),$$

$$(\beta), \quad (p, q) \cdot p \in \Lambda \cdot q \in \Lambda \cdot \supset \cdot p \supset q,$$

$$(\gamma), \quad (p, q) \cdot p, q \in \Lambda \cdot \supset \cdot \sim (p \supset q \cdot \vee \cdot q \supset p).$$

(α), (β), and (γ) can be shown to be true in precisely the same way in which (a) was shown to be true. For example (α), which is equivalent to

$$(\alpha') \quad \sim (\exists p, q) \cdot p, q \in \Lambda \cdot p \supset \sim q,$$

is true because it is the case that

$$\sim (\exists p, q) \cdot p, q \in \Lambda.$$

Prof. Carnap's assumption of Λ as his set of premises for Σ may seem to be both a neat and important device, since it so readily solves a number of important problems. As will be seen from what is said below, by means of this device he can also demonstrate that the controversial postulates of infinity, selection, and reducibility are analytic! Unfortunately however, inconsistency, incompleteness,

¹ *Philosophy and Logical Syntax*, p. 45.

² *Ibid.*, p. 48.

and dependence can also be demonstrated for the primitives of his set, i.e.:

$$\begin{aligned}(\alpha''), & \quad (p, q) : p, q \in A \cdot \supset \cdot p \supset \sim q, \\(\beta''), & \quad (p, q) : p \in A \cdot q \in A \cdot \supset \cdot \sim (p \supset q), \\(\gamma''), & \quad (p, q) \cdot p, q \in A \cdot \supset \cdot (p \supset q \cdot \vee \cdot q \supset p).\end{aligned}$$

These are true for exactly the same reason that (α) , (β) , and (γ) are true, viz., they are *vacuously* true.¹ It turns out thus that by assuming so very little from which to derive the theorems in Σ Prof. Carnap is able to demonstrate altogether too much for his primitives.

For these reasons the assumption of a *null* class of premises for Σ may strike a great many people as either a trivial or absurd device. Prof. Carnap, however, seems to think it highly important; for he makes frequent use of it in his book, *The Logical Syntax of Language*, and moreover defines the extremely important term "analytic sentence" by reference to it. He first defines "analytic sentence" in the way in which "tautologous proposition"² is frequently defined: "... it can be established that $S_1 \supset (S_1 \vee S_2)$ has the truth-value distribution T, T, T, T, and is thus unconditionally true whether S_1 and S_2 be true or false. Later on we shall call such sentences *analytic sentences*."³ Later he redefines "analytic sentence" in the following manner: "A sentence S_1 is called analytic (in I) when it is a consequence of the null class of sentences (and thus a consequence of every sentence)."⁴ Such sentences he also calls "valid": "Our definition of validity is as follows: a sentence is called *valid* if it is a consequence of the null class of premises. Thus, in the language of Russell, the sentence ' $p \vee \sim p$ '—usually called the Principle of the Excluded Middle—is a valid sentence; and so likewise are all the other sentences for which proofs are given in the *Principia Mathematica*. . . . Therefore a proof in the *Principia Mathematica* is a chain of direct consequences beginning with the null class of premises and ending with the sentence proved. This sentence is thus a consequence of the null class of premises and therefore—according to our definition—valid."⁵

Expressed symbolically, a sentence s is analytic or valid, according to Prof. Carnap, if it is the case with regard to it that

$$(b), \quad (s') : s' \in A \cdot \supset \cdot s' \supset s,$$

that is to say (where $\phi(s) = s$ is valid),

$$(s') : s' \in A \cdot \supset \cdot s' \supset s : \supset \cdot \phi(s).$$

¹ We say that a universal proposition is vacuously true if the function upon which it is constructed is vacuously satisfied.

² L. Wittgenstein, *Tractatus Logico-Philosophicus*, prop. 4.46.

³ R. Carnap, *The Logical Syntax of Language*, p. 28.

⁴ *Ibid.*, p. 39.

⁵ R. Carnap, *Philosophy and Logical Syntax*, pp. 48-49.

(b) is plainly true, again because $\sim(\exists s') \cdot s' \in A$ holds. Consequently, in accordance with his definition of "valid sentence", s (e.g., the sentence " $s_1 \vee \sim s_1$ ") is valid or analytic. By use of this definition of "valid sentence" Prof. Carnap is able to reduce considerably the task of proving theorems in Σ . In fact, he could dispense entirely with "chain proofs", since every theorem in Σ can be inferred *directly* from the A -premises in precisely the same manner in which he infers the usual primitives. It is to be observed however (and this is not such a palatable consequence) that a *contradictory* sentence, e.g., $s_1 \cdot \sim s_1$, is also a consequence of the A -premises:

$$(c), \quad (s') : s' \in A \cdot \supset \cdot s' \supset (s_1 \cdot \sim s_1).$$

(c) is true for the same reason that (b) is true. According to this definition of "valid", then, contradictory sentences (and of course synthetic ones also) would have to be classified as valid or analytic. Furthermore, as a result of this consequence, Prof. Carnap is committed to a plain contradiction. He holds that "No sentence (and sentential class) is at the same time both analytic and contradictory",¹ i.e. he holds in general that "... the conditions for 'analytic' and those for 'contradictory' are mutually exclusive. . . ."¹ But plainly " $s_1 \cdot \sim s_1$ " is a contradictory sentence (in his sense),² which because of its also being a consequence of the A -premises would at the same time have to be analytic; so that the classes of analytic and contradictory sentences would have to be supposed not mutually exclusive.

M. LAZEROWITZ.

¹ R. Carnap, *The Logical Syntax of Language*, Theorem 34e. 10, p. 116.

² R. Carnap, *Philosophy and Logical Syntax*, p. 49; see also *The Logical Syntax of Language*, pp. 39-40.

VI.—CRITICAL NOTICES.

Philosophy and the Physicists. By L. SUSAN STEBBING. London: Methuen & Co. Ltd., 1937. Pp. xvi + 295. 7s. 6d.

'UNFORTUNATELY', writes Prof. Stebbing, 'there are famous scientists who do not seem to realise that their subject has an intrinsic interest for the common reader, and accordingly they seek to arouse his emotions, thereby inducing a frame of mind inimical to intellectual discernment' (5.5). Why then does the common reader go on and on buying fairy stories in scientific clothing? If he went on buying up edition after edition of *Round the World in Forty Seconds*, in spite of its containing only blank pages, one could hardly call that interest in travel. Why, then, if for a decade he has tirelessly devoured *The Mysterious Universe* and *The Nature of the Physical World*, should this be called a straightforward interest in science? Is it not better called an interest in the alleged 'philosophical implications' of physical theories, in their supposed 'far-reaching consequences for philosophy'? (ix, 5). What the common reader has shown interest in is whether real, brown, solid tables are really real, brown and solid, whether matter is not after all thought, whether we really have power to do what we have power to do, whether there is a god, and so on, and whether scientific theories have any bearing on these problems. How else are we to describe the fact that by comparison with Prof. Eddington's enquiry into those matters such a work as Prof. Thomson's elegant, straightforward account of the growth and nature of "atomic" hypotheses languishes?¹ This is not in any way to mock at the common reader for his interests, or at Jeans and Eddington for what they have written: it is rather to emphasise the extent of the service Prof. Stebbing has performed for the common reader in at last giving skilled consideration to their problems. As she many times emphasises, scientific or mathematical training is no guarantee of ability to deal with these problems; but in view of the decade that has elapsed between the appearance of *The Nature of the Physical World* and this, the first adequate consideration of it by a philosopher, it must appear either that 'philosophical training' (xi, 5) is no guarantee of it either, or that philosophers are unaware of what the common reader is thinking, or uninterested in what he thinks.

¹ Cf. 100.7: 'He seems to regard his audiences as composed of childish persons ready to be charmed with parables and fancies.'

Certainly it cannot be said that the majority of philosophers have 'avoided slipping into' (xi, 5) the very pitfalls which have so readily received these able and honestly enquiring physicists; and it must be said that if philosophers had been more skilful in avoiding them, and been more in contact with common trends of opinion, there would surely have grown up a body of opinion sufficient to prevent them slipping into their largest pitfalls, and the public from being deluded by their crudest confusions. But to call the confusions crude is, again, not to blame the physicists who fall into them and the public who follow, but rather the philosophers who have been so little able themselves to avoid them, or to assist others to do so. Prof. Stebbing's exhaustive exposition and criticism of these arguments should leave neither common reader, physicist, nor philosopher in doubt as to their worth, and one can only hope that her work will reach a high proportion of those places for which it is intended. That it is unlikely to do so is primarily due to no defect in the work, but rather to its merit; for few are likely to follow Prof. Stebbing through the rigour of her discussion with the prospect of having to abandon many comfortable notions.

Prof. Stebbing has a particularly low opinion of the metaphysical extravagances of Jeans: his argument that there is a Great Architect of the Universe, who 'is a pure Mathematician, and that the Universe is his thoughts' (14.6) is carefully analysed and shown to rest on simple confusions. This part of the book should be comprehensible by any reader, and any inclination to follow Jeans will have a struggle to survive it. There should be no difficulty in following her refusal to be terrified by Jeans' picture of us as beings 'standing on a microscopic fragment of a grain of sand' in a universe of 'vast, meaningless distances', 'terrifying because of our extreme loneliness, and because of the material insignificance of our home in space', 'terrifying because it appears to be indifferent to life like our own' (p. 9): she therefore stands in no need of the comfort she refuses to accept., viz., that 'there is no *matter* to be afraid of, and no meaningless distances to appal us' (14.6), 'we are not terrified by the size of the structures which our own thoughts create' (14.8). She prefers Ramsey's picture 'drawn in perspective, and not like a model to scale; the foreground occupied by human beings, and the stars as small as threepenny bits' (12.7). Still more reprehensible than this 'strangely perverted sense of values' (10.7) is Jeans' lack of consistency: 'To regard the laws of the universe as having been specially *selected*, to speak of laws as *producing* this, that, or the other is not considered by Jeans to be inconsistent with dismissing "every trace of anthropomorphism from our minds".'

Jeans is firmly, if justly, dealt with, and we pass to more lenient treatment when we come to consider Eddington's Barryesque picture of a measuring rod as a bewildered, wondering child which 'wants to do just as it did before', of the plank which is really just a swarm of flies, and the elephant sliding down a hill.

In the third chapter, 'Furniture of the Earth', Prof. Stebbing first gives a list of things we know from time to time—e.g., that the table I am leaning on is real and not a shadow cast on the wall, is solid not transparent or malleable, is white not colourless, and so on; *secondly*, she remarks that if I say of this obviously solid table that it is not solid I am not 'speaking in conformity with the rules of good English' (46.9), and that I am 'expressing a denial in common-sense language used in such a way as to be devoid of sense' (51.7); for 'if the plank is non-solid, then what does "solid" mean?' (52.7), and 'if the plank is non-solid, then where can we find an example to show us what "solid" means?' (53.4). It might have been better to have augmented this point and (1) used it to throw light on the peculiar status of common-sense knowledge, so much debated now by philosophers and so vital to the problems we are dealing with, and (2) sacrificed some of her 'asides' to developing its force against Eddington's idea of 'the two tables, the ordinary and the scientific'; i.e., if we say in the present example (where all my papers are on one table) that they are on two tables (and that there are two lots of papers), 'where can we find an example to show us what "one table" and "one lot of papers" means?' The discussion which in fact follows concerning the absurdity of calling the scientific a 'shadow' of the real table, and of saying that a 'coloured object is duplicated by something with regard to which it would be meaningless to say it is coloured' (60.7), viz., a group of electric charges, and a comparison of this with the duplication of the Image-world and the Real-world by Descartes and Newton—all this discussion raises too many interesting points in a space too short to deal with them.

Prof. Stebbing then deals with Eddington's ideas about the use of symbols in physics. He describes himself as playing a game called 'world-building', which is, as Prof. Stebbing puts it, the 'construction of a general deductive system, i.e., of a mathematical structure' (82.4) in which the laws of conservation of energy, mass, momentum, and of electric charge, and the law of gravitation are deduced from some highly general premisses. We must distinguish two kinds of philosophical trouble he gets into about this: (1) some rather obvious confusions which lead him to say such things as that we *make* natural laws, and do not *discover* them, that we *add* them to nature, and so on. These confusions are most adequately exposed in this chapter; (2) really serious difficulties about how mathematical equations are applied in physics, which lead him to the simpler confusions in (1); and serious difficulties about the nature of deductive systems, e.g., what Braithwaite has called the idea that the mathematical logician 'can make cement without lime' (74.6). Prof. Stebbing gives a very satisfactory account of the confusions in (1), and also of difficulties about the nature and application of deductive systems: though, if it were not too much to ask in so brief an outline, the reader would be greatly helped by a more extended

treatment of Prof. Stebbing's own positive account of their nature and application. She well says, *e.g.*, 'Eddington has so been able to build his world only because, at the present stage of the development of the physical sciences, he could take for granted the field laws, and could thus select just those hypotheses that are necessary and jointly sufficient to entail Maxwell's laws of electromagnetism' (76.5). And 'Only when the terms in the mathematical identities [in the structure] are identified with electric and magnetic quantities, can the identities be regarded as Maxwell's equations. . . . The justification for making the identification is that the electromagnetic equations are true as a matter of experimental fact' (82.5). On the other hand, the reader would have been greatly assisted by a fuller exposition of Prof. Stebbing's own view that the field laws are now in the position of 'conventions', *i.e.*, 'experimental facts will now be so interpreted as to be consistent with them' (86.3); she says also that they are 'guiding principles in physical science' (87.1), and that 'the mind selects from Nature those properties that are conformable to the conservation laws' (90.6). This assistance to the reader could very usefully have been given by taking some simple case in which the phenomena are *prima facie* not conformable to a given conservation law, and considering how scientists would deal with the case, and what they would do if more and more cases of *prima facie* non-conformity arose. Without consideration of such cases, the phrases 'guiding principle' (etc.) are no more than suggestive. Would one ever reach a point at which to express the truth one would have to say, 'It is a fact about the natural world that it *can not* be so ordered that conservation laws apply to it' (86.8)? or could one equally express the truth by saying, 'The world is so ordered that the conservation laws still apply, provided we make *sufficient* supplementary hypotheses'?

There follows an excellent criticism of Eddington's description of the mind as occupied by an editor who decodes obscure telegrams conducted to him by wires (nerves) coming from an outside world of inscrutable nature. Similarly, behind sets of positive readings there stands an inscrutable nature; and another stands behind at least one of the terms in the set of cyclic definitions; and another stands as that which connects the 'two worlds'—the shadow and the familiar. I shall not go into the detail of the arguments on these points, as they are on the whole well known to philosophers and comparatively straightforward. But, if I may pick out a point for criticism, it is the definition Prof. Stebbing offers of 'Nature'—*viz.*, 'whatever is, or could be, sensibly experienced together with the occasions and conditions of what can be sensibly experienced and the modes of their interconnections' (115.1), which, 'in certain of its aspects' is 'the theme of study propounded to the physicist', *viz.*, in 'those aspects that are susceptible of mathematical treatment' (115.2), 'of metrical treatment' (117.1). The common reader, to say nothing of the philosopher, would have been greatly helped by

the giving of the examples required to explain the terms 'sensibly experienced', 'what can be sensibly experienced', 'occasions', 'conditions', and especially by examples of 'what is *not* susceptible of mathematical, or metrical, treatment'. Shorn of the examples, these words only hint at what Prof. Stebbing has in mind.

We come now to a section called 'Causality and Human Freedom'. Before giving what Eddington (and other physicists) and she herself have to say on the topic, she has the excellent idea of giving an outline of the difficulties in which Mill and Huxley found themselves, and which Eddington is trying to escape from by way of a 'Principle of Indeterminacy'.

She then defines a 'deterministic system' as one in which 'if the initial state of the system and the laws of its behaviour are known, then its states at any other moment can be predicted, and the prediction can be verified by measurement. Any science which is wholly based upon such reasoning may be said to be a physically determined system, and its "scheme of law" is a deterministic scheme of law. The theories of classical physics provide an example of such a deterministic scheme' (170.8). She then gives a very useful account of recent developments which have 'shown that in the case of sub-atomic phenomena it is *in principle* impossible to determine precisely the initial conditions' (171.4). To do so one would have to measure both the initial position and the initial momentum of a given particle: in order to measure the first accurately one requires to use radiation of very short wave-length, and in order to measure the second accurately one requires radiation of a comparatively long wave-length; for radiation of short wave-length would consist of photons of great energy, part of which would be lost to the given particle and so alter its momentum.

Prof. Stebbing is content with saying: And so 'it is not possible, even in principle, to know the initial conditions in the case of quantum phenomena' (182.3), and 'the development of quantum mechanics has shown that no precise meaning can be given to the combination of momentum and position as simultaneously ascertainable in the case of an electron' (182.7). (She must, I think, mean: 'no meaning can be given to the combination of momentum and position as simultaneously *precisely* ascertainable in the case of an electron'.) But a crucial point is not made clear in her account. She says of 'the radiation would have to be of very short wave-length' that 'This is *equivalent* to saying that the radiation would consist of photons of very great energy' (180.4). Does she mean that from the fact that a radiation is of very short wave-length it *follows logically* that it consists of photons of high energy? or that this connexion is so *as a matter of fact*? If it is the latter, one can say: 'This impossibility can hardly be one of *principle*, since one can imagine a radiation of short wave-length to be discovered *not* consisting of photons of high energy; and if this were done, we might precisely measure the two simultaneously'. If the former, one

might say, 'I'm not prepared to lay it down that nothing will ever be suggested which it would be proper to call "measuring with precision the position and momentum of such a particle simultaneously"', and the empirical facts you have adduced do not, as you can see, force me to abandon saying in this case as in others: "The future position and momentum *must* be determined by something which is the case now"'. I feel that the matter is far from settled until the possibility of someone's saying such things as this has been considered, and until it is considered whether the difference between this and what Prof. Stebbing says is a question of fact (it is obvious that the two are *apparently* inconsistent), or whether it is a difference of *attitude*.

We shall now have to pass over much that Prof. Stebbing says about *probability*, which is both interesting and within the compass of the common reader, in order to come to her treatment of free will where, I fear, I find some things rather confused, and feel that the common reader's understanding of the problem has not been as much assisted as it might have been.

If one thing excites the common reader's interest in recent physical theory, it is its supposed relevance to the problem or problems which have been discussed under the name of "free will". This chapter therefore is of the first importance, and unfortunately it cannot be said that either the statement of the problems or their treatment is as careful as it seems justifiable to expect.

One statement of 'the problem' is as follows :—

- (A) 'The problem of free will does not present itself to plain men as a problem of analysis, but rather as a problem of reconciliation' (224.5), *viz.*, between

'our *beliefs* concerning the nature of the physical world' and each of the following :

- (1) 'the *fact of our intuition* of freedom' ;
- (2) 'our *beliefs* with regard to the correct *analysis* of that intuition' ;
- (3) 'our *beliefs* with regard to the nature of the conditions of *moral responsibility*.'

The question 'What beliefs concerning the nature of the physical world?' is answered thus (222.6) :—

- (i) (a) classical physics ;
- (b) evolutionary biology.

About those the problem is whether they 'involve the denial of freedom'.

- (ii) recent physical speculations.

About these two problems are mentioned,

- (α) whether they lead to the reaffirmation of freedom ;
- (β) whether they have any bearing at all on the problem.

But later we find a different statement, *viz.*, that

(B) 'The *problem* of free will does not arise until we pass from the notion of being responsible *for* [an action] to the notion of being responsible for [an action] *to* [somebody or something]' (227.5), and still later a third,

(C) 'The problem of freedom is the problem of the self' (249.7).

On page 222.5 we find the following:—

'The right way to approach the problem of human freedom is to attempt to answer the question:—

What do we *suppose ourselves to be asserting* when we say

- (i) that *we are free*, or alternatively,
- (ii) that *our actions are free*, or at least,
- (iii) that *sometimes we act freely*?'

This question can be taken in two ways:—

- (1) as asking for an account of a philosophical theory, *viz.*, the theory that we have free will,
- (2) as asking what is the analysis of such ordinarily used propositions as the following:—
 - (i) 'I *am free* to keep or break my promise.'
 - (ii) 'My act in refusing the offer is *free*.'
 - (iii) 'I *acted freely* in refusing the offer.'

I take it that (2) is what is intended.

Now (2, i) can be put in the words 'I *have the power* to keep or break my promise'; (2, ii) in the words 'My act in refusing the offer is *deliberate*'; (2, iii) in the words 'I *acted consciously* in refusing the offer'.

Having apparently said that the right way to approach the problem of human freedom is to attempt to analyse such propositions, Prof. Stebbing mentions the statement 'I have the power to keep this promise' and remarks 'What it is *to act*, to be *conscious of acting*, to have a *power of acting* in such and such a way—these admit of analysis. . . . With these analyses we are not concerned' (224.5). And again she writes: 'To me it does not seem that any puzzling questions arise in connexion with the statement "*I did it*", or with its elaboration in the form "*I am responsible for it*"' (227.3). Yet later she does in fact go on to treat the problem in the way she originally said it should be approached, and says: 'Responsibility, it must be emphasised, is ascribed to persons. Whatever difficulties there may be in the notion of responsibility, it may safely be asserted that their solution must presuppose a satisfactory account of *what it is to be* "a person", what it is that "I" in the sentence "*I acted freely*" refers to' (238.6). Then she proceeds some way with analysis of 'I did this' in saying that it entails (a) 'This sprang from what I

was', and (b) 'It is false that this was spontaneous, uncaused': the relevant passage is: 'Let it be granted that "heredity, training and other predetermining causes" have made me what I am. Surely I am still responsible for what I do. Suppose, however, that my . . . decisions are spontaneous, uncaused, in no sense springing from what I am. How then can I be said to be responsible for that which issues from that choice? It would, indeed, be a straining of language to say either that it was "an act of choice" or that it was "mine"' (239.3).

We shall return later to the analysis of '*I did this*', and only ask for the moment why Prof. Stebbing at first asserts that to attempt to analyse it is the right way to approach the problem of free will, then denies that it is relevant to it at all, but finally does herself treat it as relevant and actually suggests an analysis.

It seems to me that she has made the following formal slip: she points out that the problem presents itself to plain men not as a problem of *analysis* but rather of *reconciliation*, and assumes that from the fact that it is one of reconciliation it follows that it is not one of analysis. But this does not follow unless we say that it is a problem *only* of reconciliation, and it is easy to see that it is in fact a problem both of reconciliation and analysis. The problem given in (A) above is roughly: 'Is (α) "every event is completely determined by earlier events" compatible with (β) "I am free to do this", and with (γ) "I am morally responsible for doing this"?' Plainly, in order to decide this one would require to attempt a most careful analysis of '*I am free to do this*'. Again, if we take the problem referred to in (B) above, we get: 'Is (α) "a being has predestined my ways" compatible with (β) "I am morally responsible for doing this"?'; and this too one cannot answer without a most careful analysis of '*I am free to do this*'. The reason for this need not be laboured: it is that in their ordinary senses '*I am responsible for this*' entails '*I am free to do this*'; or, if the matter is retrospective, '*I was free in doing this*', '*I did this*', '*I had the power to do or not to do this*'. If we say, for example, "He could not help it; he was driven to it by an inherited madness", it is inconsistent to add, "And he is morally responsible for having done it". Thus if '*He did it*' is inconsistent with 'Every event is completely determined', then also 'He is responsible for having done it' is inconsistent with it: and this is the reason given in controversies about free will for their being inconsistent.

And the reason given for saying that '*He did it*' is inconsistent with 'Every event is completely determined' is this: To say that '*He did it*' is to say, in part, that the doing of it was *not* completely determined by earlier events, which is plainly inconsistent with the proposition above. This is in fact how Prof. Stebbing does deal with the problem. She enables herself to assert that 'Every event is completely determined' is not inconsistent with 'I am responsible for this' by giving as an analysis of '*I did this*', 'This was deter-

mined by what I am', and adding that 'This was in part undetermined' is not entailed by 'I did this'.

Unfortunately, her statements on the topic do not enable us to be clear as to what she takes the relation to be between 'He is responsible for this' and '*He* did this'. Is it one of entailment or matter of fact connexion? Here is what she says:—

(1) 'Ordinarily, I think, *we accept* responsibility for those changes in a situation which result from *our* activity' (225.7).

(2) 'What we inadvertently do is just that for which *we are not* conscious of responsibility' (226.7).

(3) "'I am responsible for this" means "This has happened . . . and *my* decision was a causal factor in its happening"' (225.9).

(4) "'I am *responsible for* it" is an elaboration of "*I did it*"' (227.4).

The first of these makes a statement of fact, *viz.*, that the changes about which, as a matter of fact, we are prepared to say 'I am responsible for this' are those which result from our own activity; whereas (3) and (4) are the assertion that if we say 'I am responsible for this change' we are by that already saying that this change is one resulting from our own activity, and, substituting in (1), we should get 'Ordinarily we accept it that our decision is a causal factor in the happening of those changes which result from *our* activity'.

One cannot have it both ways, and it is of the first importance to make clear whether we are concerned with something which is part of the meaning of 'He is responsible' or with something which is commonly held to be associated with being responsible. We have to ask in fact, 'Was the problem of free will rightly stated in the form (A, 3) above? Are we concerned to reconcile "our beliefs with regard to the nature of the physical world" with "our beliefs with regard to the nature of the conditions of moral responsibility", or with what is being said of a person when it is said that he is morally responsible?' It is a serious omission that this question is not treated.

(A, 3) suggests the following: We are dealing with a conflict of opinions: one (that every event is completely determined) a hypothesis held by scientists, and (until recently) amply supported by their investigations; the other the commonly held opinion of ordinary people, and so, presumably, based on experience and yet liable to confutation by further experience (the common opinion that the sun puts the fire out is based on what we see when it shines on a fire, but is confuted by more careful observation). Thus Sir William Bragg (quoted p. 233) says that in addition to scientific laboratories 'we have another laboratory, wherever we meet our fellow men, and *there also we learn by experience, and make observations* on which we base our thoughts and actions. We *feel* that we have some control over what we do, and may act selfishly or unselfishly. If the lessons

of the two laboratories seem to contradict each other, etc.'. Again, Eddington speaks of 'doubting "our intuition of free will"' (223.9). And Prof. Stebbing writes: '*I am conscious of having power to act*' (224.3); and '*What we inadvertently do is just that for which we are not conscious of responsibility*' (226.7). In these passages we find the varied suggestions that what justifies us in saying '*I have power to do so and so*' is

*learning by experience,
making observations,
feeling that I have power,
intuition,
consciousness that I have power.*

The general idea of the last three is, to put it coarsely, that we've got a *hunch* that we've got power to do this and that: and passages already quoted suggest that we've also got a hunch that we're *responsible* for a thing only if we had power to have done otherwise.

Since it is a conflict between our hunch and what is alleged to be established by scientists, nothing could be more important than to try and see how we come by our hunch, and yet Prof. Stebbing does not attempt this at all.

The reader can hardly fail at this point to recall some instances earlier in the book where Prof. Stebbing did with some success defend the plain man's hunch against the scientist's attack, and that her method was to show that the alleged hunch wasn't a hunch after all; and so to surmise that here too it may turn out to be no mere hunch that we have power to do this and that. Scientists seem now to have produced reason to suppose that we never really have the power to do this or that, and that hence we are never really responsible for doing this or that, just as earlier they seemed to have produced reason to suppose that ordinary tables are not real, never really red, or solid, and so on. What was effective before may be effective again, and it may be worth while to consider these earlier arguments. Let us take one which Prof. Stebbing used to show that Eddington had not succeeded in giving an argument which proved that no material thing is ever solid. She writes: '*It is worth while to examine with some care what exactly it is that Eddington is denying when he asserts that "the plank has no solidity of substance"*'. What are we to understand by "*solidity*"? Unless we do understand it we cannot understand what the denial of solidity to the plank amounts to. But we can understand "*solidity*" only if we can truly say that the plank is solid. For "*solid*" just is the word we use to describe a certain respect in which a plank of wood resembles a block of marble, a piece of paper, and a cricket ball, and in which each of these differs from a sponge, etc. . . . The point is that the common usage of language enables us to attribute a meaning to the phrase "*a solid plank*"' (51.8 sq.).

Could she not with equal effect have written: '*It is worth while*

to examine with some care what exactly it is that the scientist is denying when he asserts that we never act freely. What are we to understand by "freely"? Unless we do understand it we cannot understand what the denial of freedom to the human being amounts to. But we can understand "freely" only if we can truly say that, *e.g.*, Jones in giving £100,000 to the hospital acted freely. For "freely" just is the word we use to describe a certain respect in which this piece of behaviour of Jones resembles that of Smith in robbing the bank, and differs from that of Robinson who was found shoplifting after drugs, and that of Robertson who signed away £100,000 with a pistol at his head. . . . The point is that the common usage of language enables us to attribute a meaning to the phrase "a free action". Thus common usage of language makes the distinction between something done deliberately and something done inadvertently (as Prof. Stebbing says on p. 226.4), between 'Jones himself signed it' and 'Jones signed it—under compulsion', between 'Jones had the power to sign or not to sign' and 'Jones was powerless in the matter of signing or not signing', between 'The signing was *his* act' and 'His hand signed, but it was no act of his'. The scientist wishes us to deny that the first of each of these pairs is ever true, and his reason may be expressed thus: The use of each of these statements (and we have picked up their use from other people in picking up our ordinary language) is such that, if any movement, *e.g.*, the movement of Jones' hand in writing his name, was completely determined, then the statement is untrue of that event. Now every event is completely determined, therefore there are no events of which these statements are true. But what is the evidence for the premiss that these statements are so used that if an event is completely determined the statement is untrue of it? The evidence ought to be careful consideration of how we do in the ordinary way use such statements, what a person has to learn to look for in learning to say 'This was *his* act' whenever (if at all) it is *his* act, and to say 'He had no power to do otherwise' whenever (if at all) he had none. Some of the things he has to learn to look for are plain: *e.g.*, whether Jones was asleep when he did it, or drugged, or hypnotised, or has a mania for signing whenever he sees a cheque, or is no longer in possession of all his faculties, and so on; and, on the other side, whether he suffered from none of these disabilities, discussed with his friends whether or not he should sign, was not greatly persuaded to it or against it, ruminated over it for a time, and so on, and then went and signed. This is a rough outline of the way we draw the distinction, and it is undoubtedly a useful one in everyday affairs. For example, if we wish to prevent the recurrence of actions of a certain sort, *e.g.*, the signing of cheques which will be dishonoured, we shall hardly succeed unless we can distinguish the cases where the person could have avoided doing as he did, and where a reprimand (more or less severe) is likely to prevent recurrence, from those unavoidable by the agent, where treatment

for the drugged or unbalanced condition, or reprimand of those who gave the drugs, or of those who threatened his life is required. And if we say of a wrong action, '*He did it*', '*It was his deliberate action*', we tend to have towards him an attitude of disapproval and perhaps to express it in our way of uttering the words, and to reprimand and perhaps punish him; whereas if of some good deed we say '*He did it*' or '*It was his deliberate action*', etc., we tend to have rather an attitude of approval and to express it in our way of saying the words, and to praise him and maybe decorate him. But if of the wrong action we say, '*He did not do it, though it was the work of his hand*', '*He cannot have done it deliberately*', we do not in general disapprove of him for his part in it, nor do we tend to reprimand him or punish him, but rather to remove or discourage the circumstances—*e.g.*, we imprison the man who held the pistol over him, or blackmailed him, or otherwise got him unduly in his power; or, if his action was due to mental unbalance, we send him for treatment or, if he is beyond treatment, place him where he cannot repeat his action, and so on. Now suppose we follow the scientists' suggestion and, if we are agreed that every event is completely determined, agree never to say of a man who forges a cheque '*He did it*', '*It was his deliberate action*', '*He did it under no compulsion*', '*He had the power to sign or not to sign*', but always to say some such thing as '*Circumstances determined him to sign a worthless cheque*'; then we can do one or other of two things, either (1) we can do as we did before—have the attitude of disapproval to him, and reprimand him, and punish him by imprisonment, or (2) we may change our attitude with our words and have to him the attitude we now have to those who do wrong acts under duress, and fail to reprimand him, and not punish him at all. If we do the second, the scientist has indeed persuaded us, but the results will not be fortunate: absence of disapproval and kindness of treatment will lead to the abandonment of the cheque system, of purchasing rather than shoplifting, and many others of our present arrangements. But if we do the first, nothing will have been altered but our words; we shall fail to mark in our words the distinction we at present mark with the pair '*free*'—'*compelled*', etc., but we shall have different attitudes to and treat the two cases differently just as before. Is not this highly comparable with Eddington's wishing to persuade us to abandon the use at present made of '*solid*' and '*not solid*', and yet no doubt wishing to continue to make the distinction? for even he would still wish to distinguish the solid roof-beam from the worm-eaten, the plank that will bear one from the plank that won't; *i.e.*, he wishes us to say of our floor, '*No, no, it's not solid*' in the confident tone appropriate to '*Yes, of course, it's solid*', and step on it in the confident way appropriate to belief in this.

One way of expressing this is that he wishes us to say: '*So you see, solid things are not really solid*', and '*So you see, free actions*

are not really free'. 'What we have power to do we have not, of course, really power to do.' 'People never really *do* things; they just occur', etc.

His procedure is unlike that of the philosopher who tries to persuade us that the plank is not literally solid because it is really a group of sense-data, in that, whereas the philosopher only draws our attention to well-known facts of illusion, double vision, after images, and so on, the scientist does give us new facts on which to base his claim, *viz.*, some of the experimental evidence leading to the electron hypothesis; and the only question in dispute is whether these new results are properly described as showing that solid things are not really solid. Similarly, the arguments against the truth of such statements as '*He did it*' claim to be based on experimental results, *viz.*, that, wherever it is tried, the idea that every event is completely determined is indicated in scientific work; and it is supposed that these results are in conflict with the results of everyday observation. Let us see how this comes about.

It is often said, 'The more you know of the criminal—his heredity, his early environment, his later associates, the hopelessness of his poverty, etc.—the less you blame him and the more you will try to reform him and his circumstances'. *I.e.*, the more we can explain his act as determined by heredity or mental unbalance or vicious environment the less do we tend to say 'He had the power to do otherwise' and so 'He is responsible'. Now in fact it is unreasonable to suppose his act not completely determined by prior circumstances, and in fact we suppose the very movement of his hand in forging the signature to be explicable in terms of just prior events in his body and conditions near it; so it is unreasonable ever to say he had power to do otherwise.

This is, on the whole, a correct account of ordinary usage. Once we know that an inherited passion, or extreme and desperate poverty, or absence of affection in childhood chiefly determined the stealing, it is no longer correct to say 'He could have done otherwise' and so 'He was to blame', and the less are we inclined to disapproval towards the person. But if someone in comfortable circumstances, in their right mind, having 'had every chance in life', having planned carefully, and so on, forges a cheque or breaks a till, usage goes: 'He could have done otherwise': yet if it is shown that children who have had their thumb frequently and forcibly taken from their mouths in early childhood suffer a tremendous temptation to steal, which can be removed by bringing these experiences to memory, and if he is shown to be one of these, then it would again become correct to say 'He could not have done otherwise'.

In scientific investigation of a phenomenon we assume that *if we probe carefully enough and far enough*, we shall find the cause of it, the explanation of it. This most people would agree with; but to say that we *assume* it is to suggest that it is something for which, although we have no proof as yet, a proof (and equally a disproof)

could be given. Yet there can be no proof and no disproof of it—and here I must write shortly and dogmatically on a matter which requires elaborate and tentative discussion. Looking for causes and explanations of natural phenomena has been remarkably successful: ever so many phenomena which at first defied explanation have finally yielded to it, so that now in facing a new problem even after failure upon failure we encourage ourselves to the assault with the slogan, 'Nevertheless there *must* be an explanation', and when we still do not find one we excuse this by saying, 'We have not probed far enough'. 'There must be an explanation, though we have not yet probed far enough' does not stand at the end of a proof, and our use of it does not envisage a proof for it. Nor does it envisage the possibility of a disproof of it; repeated failure to find an explanation does not constitute a *disproof*; but if we consistently failed to find one, to repeat our slogan would be the expression of a forlorn hope not of something which we use as provable or disprovable.

Similarly, if the scientists' success in finding the complete determining factors of this and that phenomenon encourages us to say, 'So we are not *ultimately* free', '*Ultimately* we have not power to do this rather than that', no one can object by saying they have a *proof* that what we say is *false*, nor even that it is improbable. What they can do is watch and see what use we make of our words, and object if we make a wrong one.

We may, for example, say such words and cease to disapprove of people who forge signatures with no extenuating circumstance of heredity or environment, and cease to reprimand and punish them. But the scientists' success did not justify this change of attitude and course of action.

Or we may say the words and change neither our attitude nor our action, but continue to disapprove, reprimand, and punish as before, not trying, where we do not already plainly know of them, to find circumstances to explain the person's action. But the scientists' success justifies something different from this, *viz.*, the following:—

We may say the words, and, while not ceasing to disapprove, reprimand, and punish, as before, try by investigating at every turn what led to the behaviour in question to replace our attitude of disapproval, etc., by one of understanding what did bring about the behaviour and so become able to deal with such cases not by reprimanding and punishing the offender, but by arresting them at their sources.

Thus, just as one might hang over the door of a science laboratory the motto, '*Ultimately* every event is completely determined', so over a penal reform institute one might put, '*Ultimately* no one is ever responsible'.

I have given in outline how one might attempt to deal with the problem 'Do we ever really have the power to do this rather than that?' and allied questions, by the same method which Prof. Stebbing used in dealing with 'Are solid planks really solid?' and 'Are real

tables really real?' Let us turn now to what Prof. Stebbing gives as a solution to the problem.

'Let it be granted', she says, 'that "heredity, training, and other predetermining causes" have made me what I am. Surely I am still responsible for what I do. Suppose, however, that my . . . decisions are spontaneous, uncaused, in no sense springing from what I am. How then can I be said to be responsible for that which issues from that choice? It would, indeed, be a straining of language to say either that it was "an act of choice" or that it was "mine"' (239.3). In various places she puts forward the following as analyses of 'I did this', 'This was my doing', 'I had power to do this or not':—

- (1) This *sprang* (in some sense) from what I am (227.4).
- (2) This *proceeded* from what I am (249.6).
- (3) This *proceeded* from the person I am (242.3).
- (4) I (in some way) *contributed* to the occurrence of this (247.4).

Her final word on the matter is:—

(5) 'The problem of freedom is the problem of the self. Human freedom consists in this (a) that we do not yet know what we shall be, because we are not yet finished, and (b) that what we have already become and are becoming *plays a part in* what we shall become.'

It is hardly necessary to point out that each of these supposed analyses of 'I did this', or explanations of what my freedom consists in, is nothing but a metaphorical picture of it—that it suffers in fact from the very defect of Jeans' and Eddington's supposed explanations which Prof. Stebbing has so clearly exposed. The act is pictured as

*springing from,
proceeding from,
being contributed to*

by something which is variously described as

*what I am,
the person I am,
what I have already become and am becoming,
I.*

That she does take them as explanations is explicitly shown on page 242-2, where she says that 'my acts *proceed from* the person I am', gives 'a quite precise sense' to 'my acts are determined'. It might be thought that what she means here is that it makes the meaning more precise not by substituting 'proceed from' for 'are determined by' but by saying *what* they proceed from or are determined by, viz., by 'the person I am'. But 'This act proceeded from the person he is' is, so far as I know, not a phrase used in English, though it is not unlike one used, viz., 'This act proceeded from *the sort of person*

he is ' which would be the same as 'This act proceeded from *his* character'. We might well say, *e.g.*, 'it proceeded from his dissolute character'. Thus perhaps we may take her to be saying here that a person's acts are determined by *his dispositions* (to adopt Prof. Broad's expression—"dispositions of the agent" (236.4)), and later (249.8) to be saying that that they are free *means* that they are so determined. This is suggested by the following sort of case: Suppose a person does something very far from his nature: *e.g.*, a kind, gentle person (Jones) who has always been affectionate to his child suddenly murders the child; we say, 'It was not *Jones* who did it: that is not the sort of person he is; some brainstorm *must* have seized him'. Whereas if Bloggs, a dissolute lout, does this, we may say, 'That's just the sort of thing *he* would do: he deserves all he gets'.

But Prof. Stebbing's formula, though suggested by such cases, is far from covering all; for if we then find that Bloggs became dissolute and a lout through a hereditary disease of the brain-cells, we should be wrong to say it was *his* act, even though it proceeded from what he had become and was becoming. We might try to save the formula by adding, 'An act is a man's own when it proceeds from his nature, and he had the power to have either that or a different nature'. If now we try to say that we mean by 'he had the power to have a different nature' that 'his having the nature he has proceeded from his having had *that* nature', our difficulty recurs.

In general, of some acts which proceed from a person's nature we say, 'He had power to do this or refrain' (*e.g.*, we often say this of a generously disposed person's acts of generosity); while of others which proceed from his nature we say, 'He had no power to do otherwise'.

There follows a chapter in which a critical account is given of Eddington's view that our mind keeps 'its record of the flight of time' by 'the reading of some kind of a clock in the material of the brain', *viz.*, the increasing randomness of the distribution of its ultimate physical elements. Prof. Stebbing shortly and effectively counters the general suggestion that increased disorganisation of the ultimate physical elements in the universe is 'the signpost' by which the mind is guided in 'selecting its direction in time' from earlier to later. She remarks: 'If increase of entropy is the criterion of the distinction of earlier from later, how was it discovered that entropy increases *as time goes on*? (262.8). . . . These entropy-clocks measure "the rate of disorganisation of energy", and Eddington has distinguished between *the increase of energy* and *the passage of time*' (263.3).

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Psychology Down the Ages. BY C. SPEARMAN. Two Vols.
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THIS is not what might be called a 'straight' history of Psychology, and for a very good reason. Prof. Spearman is out to show, among other things, that no steady advance in the study of Psychology can be demonstrated. There are no 'turning points', no great discoveries which have set the feet of Psychologists further on the path towards universally accepted conclusions. Even if one were to stress, which Prof. Spearman does not, the change over from the analytic approach to the biological, one could not fit all modern investigators into the scheme.

The reputation of Psychology as a cure-all of our ills, as a body of doctrine which, if people would only learn it, would finally explain the complexity of human behaviour, is a fake. Psychologists differ; they use the same term in different senses; they are so ignorant that they do not realise that what they are saying now has in many cases been said by the Greeks and the Schoolmen hundreds of years ago; and when they come out with a 'discovery' such as the self, "the general result has been", as Prof. Spearman remarks, "back to common-sense again!"

In short, one of the most distinguished of English Psychologists is putting his colleagues in their place. Readers of his other works will be familiar with his flashing wit, and he uses it to tremendous effect in the present volumes: "Altogether", he says, for example, "if Associationism may be regarded as Psychological Enemy No. 1, cannot Gestaltism put in a claim to be at any rate No. 2?!"

Of course Prof. Spearman's wit is an acquired taste, and sometimes a reader, whose sense of humour is less acute, cannot help wishing that he would give us more of his erudition when he is pointing out that some poor modern is merely reflecting the views of his ancestors, in place of the brilliant elegance with which he spears his victim with a list of mediæval names. However, the Professor will have his little joke and there is an excellent set of notes which tell us where to look up relevant passages for ourselves. The modern Psychologist, ignorant and abashed, bows to the storm and is grateful to the author for having given his own views on a large variety of subjects.

The book is divided into five parts.

In the first, "What Psychology is about", Prof. Spearman discusses the various methods of investigation which have been used in Psychological enquiry 'down the ages', and the various problems which have been taken to form the subject-matter of the science from time to time. He points to two tendencies—the classification of the elements and the analysis of the elements themselves.

Psychologists have very naturally tended to group similar-seeming phenomena under one head, and in the second part, "What the Psyche can do", he discusses the classes of phenomena that have been made up in this way. We have intellect, intelligence, sensation, memory,

imagination, the *orectic* or dynamic faculties, and emotions. Such classification is, after all, inevitable, but, as Prof. Spearman shows, it has very dangerous results. If only it were merely taken as a matter of convenient speech we should not object, but there is an insidious tendency to 'reify', and a classification of similar seeming pieces of behaviour may turn into a structuration of the mind. When this happens, when for example the 'faculty' of memory is thought of as an instrument by means of which we remember, we are prevented from discovering that memory for one kind of material does not necessarily go with memory for another. No one is more entitled to speak on this subject than Prof. Spearman, whose own work has been so conspicuously valuable in the field of correlation.

Some attempt has been made to cope with the 'reifying' tendency by the 'functionalists'. Prof. Spearman is not very sympathetic to this school. He quotes writers who insist that the mind must be regarded 'actively' and not 'statically' and asks with italic emphasis: "*What does all this really mean?*" He complains that the 'functionalists' confuse 'volitional' and 'un-conscious' activity, which, considering the extreme vagueness of Psychologists, demonstrated on every page of this work, is doubtless only too likely to be true; but it would have been rather more helpful if the author had used his great powers of accurate statement to reformulate what must be admitted to be an interesting position. Ought we not, ask the 'functionalists', to apprehend the organism as a living creature which has to face situations, so that what happens in those situations, whether, *e.g.* a memory will be accessible or not, depends on the dynamic condition of the organism at the moment and the nature of the situation in which it finds itself? Such a view stresses the fact that 'memory' is something that the organism *does*, and it leaves open the possibility for propositions about the general tendency for one person to have his memories more accessible than is the case with another, either on all occasions or on certain types of occasion. Of course we want a better formulation than that, and we ought to feel more uncomfortable than we do when we glibly use the word 'situation', but when it comes to criticism we cannot help preferring someone who tries to understand what we are trying to say, to a person who hauls us over the coals for not saying it properly. The truth, and if we are right a very important truth, seems to be that Prof. Spearman does not take kindly to the 'biological' approach. The further effect of this will be apparent later.

We now pass to Part C. In this Prof. Spearman discusses the various attempts to describe those happenings, the classification of which was dealt with in the preceding Part B.

An account is given of certain elementary facts of sensation, and very proper complaint is registered to the effect that Psychologists have always neglected the problem of the perception of relations. Here again Prof. Spearman may reflect with pride on his own contribution in the shape of the 'noe-genetic laws'.

The perception of relations, however, is going to give us some trouble, and we note that when he gives some examples of related dots he remarks: "Throughout these figures . . . we have been solely considering the relations which are *objectively present*. We have left out of account the fact—only too obvious to the testee—that in actual practice a great many of these will *fail to be noticed*." (I., p. 234, author's italics).

After other matters relating to the problem of perception, we come to an important chapter on 'Ways of Regarding'. In this he stresses the fact that we can voluntarily see, say, a square of dots, or a square of smaller black squares, as constructed in accordance with various patterns. Some of us habitually play perceptual tunes on the patterned wallpaper, and we organise the patterns 'at will'. It is a perfectly familiar experience, but for '*impersonal*' Psychologies it is an exceedingly awkward one.

'Gestalt Psychology' of the type represented by Koffka is '*impersonal*' in the sense that it tries to fit human experience and behaviour into a frame-work of forces, none of which is a volitional 'I' who *does* anything. When, therefore, you have the indubitable fact that something takes place which we naturally formulate as: 'I decided to see the pattern as so and so', you are faced with an awkward situation. Petermann, for instance, considers it so awkward as to render the type of Gestalt Psychology in question untenable.

Prof. Spearman seems to take the 'subjective' organisation of the perceptual field as fundamental, and when he discusses 'Mental Unity' he writes as follows: "In the primary sense of the word, 'unity' is nothing more than a subjective manner of presenting an object to mind. It is a manner adopted for convenience, if the object is composite; by necessity if the object is simple."

The position is, however, not altogether satisfactory. When he discusses the patternisation of a square of dots he makes a series of remarks which are so significant that we must quote them at length: "We may conclude then . . . that the grouping demonstrated . . . lies fundamentally in the manner or guise of the perceiving, not in the facts that are perceived. It brings with it no further information (save such as may result from any shift of 'attention'). Essentially the grouping is of the kind indicated by the little word 'and', when for instance we say: 'cabbages *and* kings'. This relation is unique in that it can be created or destroyed at will, *without affecting the things related* (my italics). All other classes of relation do have their foundation in the nature of the things related and therefore so long as the latter remain unchanged, will themselves remain unchanged. Thus, if one blue is darker than another, then, so long as the two blues remain constant, nothing can possibly render it the lighter of the two."

"What," we may ask "*does all this mean?*"

In a passage quoted above he speaks of relations being '*objectively*

present but *'not noticed'*. What do the unnoticed relations hold between ? Unperceived sense-data ? Or physical objects ?

When I see a set of dots now 'in fours' and now 'in threes' the phenomenal field is altered : surely no one will deny that. The relations between the dots are altered ; at one time one set belong together, at another time what belonged to that set now belongs to another. Between what are the relations *unaltered* ? A set of sense-data not identical with the sense-data in my perceptual field, or physical objects ?

What is meant by that important phrase : " so long as the blues remain constant " ? If one perceptual blue (not that there can be any other kind of blue) is darker than another juxtaposed to it, then we may admit that it is not lighter than it. But it might be possible to place one of the ' blues ' on a background such that it now looks of equal brightness to the one you have left alone. The physical stimulus has remained untouched in some sense, but the result of it has altered. Surely it is only our clumsy way of talking that allows us to say " it *looks* of equal brightness " as though there were an objective blue that was not *really* of equal brightness. Surely the relations of ' darker than ' and ' of equal brightness to ' are in the perceptual world and no where else. It is, of course, an interesting fact that, in order to change the look of the perceptual world, we sometimes have to make an alteration in the ' geographic ' world and sometimes we can manage it by an ' act of will ' ; but the relations we thus manipulate are in the perceptual world. They are ' subjective ' in that they depend on a perceiver, ' objective ' in that they are in his presentational field.

It is this phenomenal relatedness, and particularly the parcelling of the phenomenal world into parts which belong together, that the ' Gestalt Psychologists ' are talking about when they say that forms are " in no wise less immediate than their parts ", and it is interesting to note that when Prof. Spearman asks : " What does a child see clearly first : the visual universe or single sensations ? " he answers : " Something intermediate, a window, a lamp, or maybe a bright face. " The world, that is to say, looks structurally organised from the start.

Now if we agree that from the outset our perceptual world is a continuum organised into ' belonging-togethernesses ', we soon discover that if we interpolate what we have reason to believe to be the same physical stimulus into one environment, the result will be different from what it would be if we were to interpolate it into another. It looks as though whatever we suppose to be *there* in the subject when he experiences his organised field, could be formulated in terms of forces, such that to the ' belonging-togethernesses ' in the *phenomenal world* correspond systematic arrangements of forces in the *person perceiving*. Thus if a new stimulus appears it has some system of forces to ' contend ' with. We shall further be interested in trying to discover whether, when the organism is affected by

external stimuli, we can detect any rules which will make it likely that one 'belonging-togetherness' will be precipitated rather than another.

This is, of course, the subject matter of the 'Gestalt' theory of perception. It is true that the 'Gestalt Psychologists' against whom Prof. Spearman inveighs, sometimes speak of the phenomenal 'belonging-togetherness' as a 'Gestalt', and sometimes they apply the word to the system of forces which are supposed to correspond to them; such confusion is inexcusable, but one cannot help feeling that Prof. Spearman is trying to make their theory out to be far more confused than it really is. It is true that they go in for "extremely speculative physiological hypotheses"; Prof. Spearman finds this "to say the least of it, disquieting", but he has already (I, p. 53) welcomed "cautious suggestion, or admittedly tentative hypothesis" in the physiological field. He has given no account of those phenomena which do submit kindly to 'Gestalt' treatment, such as the influence of backgrounds on figures displayed upon them, and the varieties of 'constancy' phenomena; he has rather devoted his time to an exposition of weaknesses than to a sympathetic account of what the Gestalt Psychologists are trying to do. Perhaps this would be expecting too much of one who holds such odd views about the 'subjective' and 'objective' relations between the data of perception, but it would have been convenient in a book which claims to trace 'Psychology down the Ages'.

When we come to the 'dynamic' or 'orectic' part of Psychology, Prof. Spearman discusses 'complexes of behaviour'—the way in which the "experience of a person becomes what is called by such names as 'organised' or 'integrated'", and also the problem of the 'self'. In the conclusion to Part C he remarks that "experience" (by which he seems here to mean something to do with action rather than mental content) "tends to cluster together into episodes". Here we have relations again—this time between the parts of a train of action. He certainly speaks as though the relations which make up an episode were real enough, and indeed there seems no point in saying that experience tends to cluster into episodes unless this is the case. We should, however, be wrong if we were to draw any such conclusion. On page 442 of Vol. I he says, talking about an episode in the life of a lion: "The psychologist talking of the event can well enough, for his own convenience of thought, make two sharp cuts in time; one where the event shall be taken to begin, and one where it is to end. But no such cuts exist objectively. Instead, all consciousness stretches forward in a chain that has no beginning save birth, and no end save death". It would indeed have been more convenient for the reader if Prof. Spearman had explained that in his chapter on 'Complexes of Behaviour' he was talking about the mental habits of Psychologists, and not about their subject matter at all.

Again we feel that Prof. Spearman is more interested in mental

content than in 'behaviour'. Perhaps this preference is responsible for the truly astonishing remarks he makes about Freud. Of course we must realise that in the great perspective which lies open to the erudition of Prof. Spearman the events of the last twenty years or so must seem very insignificant—unless, indeed, they happen to be concerned with letters of the alphabet, such as 'G' or 'S'; but for all that we cannot help feeling surprised at this date to read such passages as the following: "... the quite recent teaching of Freud. For he too introduces both the regard for self and that for others. But in the former (*Ichtriebe*) he disclaims any special interest. And as for the latter, this he finds to be at bottom nothing more than manifestations of 'sex'" (I, p. 377). "... the doctrine of psycho-analysis. In its reduction of all motive to one single source (sex), it eliminated the notion of self-control as superfluous" (I, p. 309). "But when Freud came on to the scene he took the very original step of proclaiming sex—in the broadest sense of this word—to constitute the *sole* object of human volition" (I, p. 359). Comment here is hardly called for. We are, however, glad to note that Psycho-analysis is not dismissed. Though the "great majority of competent psychologists have resolutely rejected or even ignored it," "practising psychiatrists" are turning to it, and it is not thought entirely worthless by William Brown, Flugel and B. Hart.

The second volume contains Parts D and E. They are happier reading, and very much more instructive than the first part of the work. In Part D, 'What follows What?' Prof. Spearman collects evidence for certain Psychological 'Laws'. There is a 'Law of Disposition': "The occurrence of any mental process makes this easier to occur afterwards"; a 'Law of Inertia': "Every mental process lags behind the stimulus in beginning and much more in stopping"; a 'Law of Constant Output': "Every mind tends to keep its total simultaneous output constant in quantity, however varying in quality"; a 'Law of Fatigue': "Every activity makes its own recurrence more difficult"; and a 'Law of Control': "The amount of cognition may be directly controlled by conation". The last named 'Law' is an attempt to cope with volitional determination, which has never received adequate treatment from Psychologists. Prof. Spearman's 'law' is put forward tentatively, and we feel sure that he would welcome any re-formulation which shows how this 'control' is brought about. He is bravely attacking one of the most scandalous gaps between Psychology and Common Sense. How often does it happen that the determinist is called upon to give advice? He usually has an *impersonal* theory of behaviour and proceeds to make an appeal to the *person* who asks him for advice, which implies personal control. There is indeed a shocking gulf between our theory and our practice, and Prof. Spearman does us a great service in insisting that what we use in practice—because we know perfectly well that an appeal to personal 'self' control does work sometimes—must find a place in theory.

These 'laws' are followed by the familiar 'Noegenetic Laws' of 'experience', 'relation' and 'correlation'.

As we should expect, the 'Alleged Laws of Orexis' are not very helpful. In the 'Epilogue' we are told of three ends which the individual tends to seek: "those of preserving Himself, his Family, and his Society", but these do not figure as 'laws' in Part D. We are not surprised to find that some difficulty is found in establishing 'laws' of desire when we read how Prof. Spearman deals with a case in which "The love of a mother for her child arouses her anger against an interloper". He evidently supposes that the mother will do something about it, and we are staggered to read: "Essentially, then, the whole proceeding is not orectic at all but *cognitive*" (Prof. Spearman's italics). Prof. Spearman frequently evinces pleasure when Psychology discovers something which is surprising to the layman. He takes the line that Psychology is too often engaged in dishing up old cheese under a fancy name. Surely nothing could be more surprising to the layman than the above statement, and we can only suppose that it has been allowed to pass on that account. Can Prof. Spearman really mean that there is no difference between a case in which a mother merely *knows* that the interloper is a danger to her child and a case in which she minds sufficiently about it to take steps to preserve whatever aspect of her child is threatened?

Part E, 'What goes with What', is an exposition of the 'two factor theory' and its developments. 'G' and 'S' are discussed and so is the further progeny, V, M.W.P.F., etc., engendered by the same method.

The method and results are of enormous interest. One theoretical question troubles the mind. The basis of the theory is a surprising mathematical fact about tetrad equations. Each number of the series that precipitates a certain kind of equation can be analysed in a certain way. The astonishing fact that the results of certain tests conform to the requirements is taken as sufficient ground for making an assertion about the nature of the organism that has produced them. This is the puzzle: supposing that a set of series of figures, drawn from *any* source *happened* to fulfil the requirements, should we then have the right to make a statement about the sources of those figures taken together? Or is it necessary that we should already have an 'intuitive' notion about the unitary nature of the source from whence the figures come? If we *can* draw a conclusion with respect to the source of *any* set of series which satisfy the tetrad equation, then surely it behoves sociologists, who have at their disposal a multitude of series of figures, to see whether they cannot discover four series which are related in the required manner, because they might then make some surprising discoveries about the inter-relation of apparently quite diverse material. If you are going to make an ontological inference, it is, of course, no answer to say that it is very improbable that series which are taken at random will ever fulfil your demands; the question is: *if they did* fulfil

your demands, would you be able to make an ontological inference, *whatever* the source from which your figures came?

And now a final question. Is the general tenor of Prof. Spearman's book quite fair? In particular instances he is undoubtedly unfair, and in one instance (Freudianism) he is simply inaccurate; but what about the general gist of the whole book? Has Psychology produced so little? Is it fair to look back at ancient scripts and say: "This was taught by the Greeks, and that by St. Thomas Aquinas?" Is it fair to point to a conclusion and say: "The plain man knew this from his cradle"?

Let us confess that the Psychologists are very ill-informed, that they use words with scandalous inconsistency, that they make blunders which they would not make if they were better philosophers, and that they frequently think a great deal too much of themselves.

Having whipped them well and stood them in the corner, let us consider one or two points in their favour. In the first place, when we read the works of the ancients we must remember that we read them and interpret them in the light of our modern equipment; in the second place there is some sense in saying that the plain man believes a great deal more than he has any grounds for believing, and when the Psychologist, after careful consideration, comes to the same conclusion that the plain man has reached without any consideration at all, the conclusion arrived at by the Psychologist is more valuable than that assumed by the plain man. Finally, the establishment of 'laws' is not the only business of the Psychologist. He also has to formulate ways of looking at human experience and behaviour which will illuminate particular instances of it, and throw into relief features which would otherwise have been missed. On these grounds the contribution of the 'Gestalt' Psychologists and the Psycho-analysts cannot be lightly dismissed.

In conclusion we cannot refrain from reiterating our suggestion that a sympathetic interest in the approach of various schools is more profitable than the castigation of their faults. It is for this reason that we recommend the second of these two volumes to students of Psychology, because in it is to be found an up-to-date survey of the approach which is associated with the work of the eminent author himself, and which has been so ably forwarded by such Psychologists as have had the good fortune to come under his influence.

W. J. H. SPROTT.

VII.—NEW BOOKS.

La genesi fenomenologica della "Logica" hegeliana. Parte Prima. By SIRO CONTRI. Bologna: Edizioni "Criterion", 1938. Pp. 332. L.20.

WITH the decline of Hegelianism and the disappearance of its enthusiastic votaries, the time seems now to have arrived when Hegel's work can be critically studied as a philosophy instead of being accepted or rejected as a gospel. In England we have a recent instance of the dispassionate scrutiny of Hegel in Mr. Foster's recent book on the *Philosophie des Rechts*, and though Signor Contri's book is perhaps less dispassionate and less illuminating, it still is a piece of careful exposition and criticism, and a contribution of value to Hegelian studies. He has embarked on no less a project than an appraisal of Hegel's system as a whole—a project which no other writer has yet essayed on anything like the scale of this proposed *Tetralogia*. This volume now before us is the first part of a two-part study of the *Phenomenology*, which is to be followed in turn by three further volumes, each dealing with one of the three sections of the *Encyclopaedia*. It is the work of a polemical critic of Hegel, but a critic who has been at pains to understand his author before criticising him. He writes clearly, vigorously and candidly, and if his later volumes have anything of the thoroughness of this one, he will have put students of Hegel very much in his debt.

It is because his book has solid merits that it is worth dwelling in this review on its defects. He begins by affirming his belief that Hegel is right against empiricists in holding that the universal cannot be "derived" from the particular or the individual, but wrong in supposing that the only alternative is that the particular or the individual must be "derived" from a universal which has priority thereto. There is, Signor Contri thinks, a *via media*, an "empirico-rationalist" route, largely untrodden so far, which leads to a position where justice can be done to individuality as well as to the "organic" character of social life. The attempt to reach such a position seems reasonable enough, and the charge that Hegel, despite his interest in history, fails to do justice to the individuality of historical facts and historical characters is commonplace. But Signor Contri is surely mistaken in asserting that Hegel "derives" (? deduces) the individual from the universal or that he *intends* to belittle the importance of individuality. On the contrary, Hegel's objection to Fichte, for example, (*Philosophie des Rechts*, § 6), is that he begins with universality and then simply tacks particularity on to it, so that there is a dualism between the two, with the second subordinate to the first. Again, in the Preface to the *Phenomenology* itself, the point of Hegel's attack on Schelling is that he conceives the Absolute as pure universality without differentiation or individuality. It is true that Hegel holds that the "truth" of the individual is the species, but he holds equally firmly that the species lives and is actual only in individuals; and they are no more "derived" from

it than the man is derived from the baby because the baby's potentialities are actualised when it grows up into manhood. It is this conception of growth which dominates all Hegel's thought and which Signor Contri surely ignores when he suggests that, in his prefaces, Hegel ought to have enunciated and justified the "principles" from which his philosophy was "derived," or when he says that Hegel "derives" the world of our experience from nothing, because the *Encyclopaedia* begins with "pure being" and "pure being and nothing are the same". It is surprising to find a writer of Signor Contri's competence so misinterpreting the first triad of Hegel's logic, and supposing that the second section of the *Encyclopaedia* is "derived" by some deductive process from the first. Whether Hegel's doctrine of the concrete as a unity of opposites can hold good or not, it is untouched by the accusation that he "derives" either of the opposites from the other, and it is no less a travesty to treat the transition from *Sein* to *Dasein* as an attempt to "derive" existence from essence.

Signor Contri next considers the Preface to the *Phenomenology*, and his criticism here is much the same as that put forward by Mr. Loewenberg in an article in *MIND* for 1934. (Signor Contri seems to be fairly well read in Hegelian literature, but important recent work on the *Phenomenology* has apparently escaped his notice. Apart from Mr. Loewenberg's articles, and the preface to the second edition of Sir James Baillie's translation, the work of Nink, for example, and Bruijn goes unmentioned.) The burden of this criticism is directed against the "esoteric" character of the Preface, but its "esoteric" character may easily be overstated. It is true that Hegel uses in it his own special terminology without any explanation, but his argument is directly relevant to the philosophical discussions of his own day, and it is doubtful if its obscurity to his contemporaries was as great as his critics suggest. Signor Contri further complains that it contains metaphors and verbal quibbles, but no arguments. Since Hegel himself refers to the "rather free style" in which it is written, and is at pains to point out that a preface "rather satisfies curiosity than gives knowledge" (presumably because it is only a "personal statement of the point of view from which the book as a whole is written"—Preface to the *Philosophie des Rechts*), these criticisms are of little account. In a preface Hegel—like other authors—never professed to be proving anything.

The longest and the most valuable part of Signor Contri's book is a "microscopic" analysis of the Introduction to the *Phenomenology*. He translates it paragraph by paragraph, expounds the argument, and then criticises it in detail. His translations and expositions are fair and clear except at one point in the tenth paragraph. In his translation (p. 173), he prints a comma at *Ansichsein* and translates the *das* which follows by *il quale*. In his exposition (p. 214), he rightly prints a semi-colon at *Ansichsein*, but he still takes *das* as a relative and translates it by *esso*. Both the first edition of the collected works and Lasson's edition give the semi-colon which the sense requires, and *das* can only be the definite article going with *Bezogene*—a substantive which would be left in the air if *das* were a relative. Further, Signor Contri seems to have been misled here by his error of referring *ihm* in the same sentence to *Wissen* instead of to *Ansichsein*. The point is of importance, because, in a long footnote, Signor Contri accuses Hegel of "profiting" from the "ambiguity" of both *das* and the punctuation, in order to make a point surreptitiously, and there is no warrant for this charge once Signor Contri's misapprehensions are removed.

His minute and trenchant criticisms of the Introduction contain a great deal which the student of Hegel will ponder with profit, but there are two crucial points where it is hard to follow him. First, in the tenth paragraph of the Introduction he finds the "genesis" of Hegel's *Logic*, Hegel's "*proton pseudos*", and the "source of the Hegelian poison". He applauds Hegel's proposal to begin his philosophy with phenomenology, with our consciousness of objects, and he asks himself how it is that, despite this beginning, Hegel can proceed to build the *Encyclopaedia* on an "empty form of relations in general" (i.e. the *Begriff*). The way from the concreteness of consciousness to the abstractness of the *Begriff* is paved, he thinks, in this tenth paragraph where the *Begriff* is "generated". Now it may be the case that the *Begriff* is presupposed in this passage (as Signor Contri very ingeniously tries to show), but to say that it is "generated" there is a very different matter. If "generated" means "generated" in Hegel's own thinking, then Signor Contri's contention is patently false, because the *Begriff* appears in the MSS. of Hegel's Jena lectures, written before the *Phenomenology* (see e.g. *Jenenser Realphilosophie*, Vol. i, pp. 259 ff.); and it was surely "generated" in Hegel's own mind in the course of his studies of theology and of Aristotle (e.g. of the passages quoted from the *Metaphysics* at the end of the *Encyclopaedia*). If alternatively Signor Contri means that in this tenth paragraph we have a philosophical argument generative (and so, in Hegel's view, probative) of the conception of the *Begriff* which Hegel then uses throughout his system, his view is surely equally untenable because Hegel holds that, since to philosophise is to think in terms of the *Begriff*, or to "look on" at its history, the *Begriff* is as necessary an assumption of philosophic thought as order in nature is of scientific thought, and it is obvious that no philosophical argument can "generate" what is a presupposition of all philosophising.

The second point where it is hard to follow Signor Contri is his answer to the old problem of the relation of the *Phenomenology* to the *Encyclopaedia*. He promises a further treatment of this question in the second part of this volume, but his position seems to be that the *Phenomenology*, starting with experience and working up to metaphysics, is an alternative to the *Encyclopaedia* which begins with a metaphysical abstraction and denies the need for any starting-point in the theory of knowledge or the phenomenology of consciousness. Hegel's statements on the matter at the beginning both of the *Wissenschaft der Logik* and of the *Encyclopaedia* make this view difficult to maintain, but Signor Contri dismisses the former as a *scappatoia* and does not discuss the latter. It will perhaps suffice to draw his attention to the first edition of the *Encyclopaedia*, § 36, and to Th. Haering's very important essay in the *Verhandlungen des dritten Hegelkongresses in Rom* (1933)—neither of which he mentions. It will be interesting to see how, if at all, he can still maintain his position after an examination of these texts. Finally, in his later volumes he will presumably be supporting his view that the *Encyclopaedia* as a whole is derived or deduced from an initial abstraction, but if, before embarking on this task, he will give further attention to § 246 of the *Encyclopaedia* (third edition) and to the last few pages of the Preface to the *Philosophie des Rechts*, he may find that Hegel was as "Empirico-rationalist" as himself.

T. M. KNOX.

An Introduction to Symbolic Logic. By SUSANNE K. LANGER. London: George Allen & Unwin, Ltd. Pp. 363. 12s. 6d.

THIS introduction is primarily intended for elementary students of logic, and as such it is an excellent book. The author, as she states in the preface, has been greatly influenced by Prof. Sheffer, and her book is, so far as I am aware, the only introduction to the subject presenting in a systematic way logic as a 'science of forms' and emphasising the importance of notions like system, abstraction and interpretation.

Chapter I, *The Study of Forms*, tries to familiarise the student with notions like logical form, structure, form and content. These are explained in a very simple way, and although this is probably the only way of making the elementary student familiar with them, it gives a deceptive appearance of clarity and hides the real difficulties and complexities of the subject. *E.g.*, 'Logical form'—Mrs. Langer says—means 'structure'... 'structure' means the orderly arrangement of parts that may be found in nature as well as in artefacts (p. 42). I venture to doubt whether Mrs. Langer's explanations of what is meant by 'Logical Form' are adequate; but I admit that nothing more could profitably be said on this point in an elementary book. In this chapter the notions of abstraction and interpretation are also introduced. In a section on "Logic and Philosophy" we are told that the aim of philosophy is to see all things in the world in proportion to each other, in some order, *i.e.*, to see reality as a system or at least any part of it as belonging to some system (p. 40). Logic, according to the author, is to philosophy what the telescope is to the astronomer—an instrument of vision. Further, it is asserted that Logic (presumably in the sense in which Mrs Langer's book is an introduction to it) is a tool of philosophy. It is supposed to enable us to see the world in a clear light and help us in the study of epistemology, metaphysics and ethics. In what way Logic is supposed to throw light on these subjects is unfortunately not explained. But we appreciate the enthusiasm of logicians who, in spite of painful experiences of what has been written in Philosophy during the last twenty years by expert logicians, still hold that the right way to approach Philosophy is through symbolic logic.

Chapters II and III, on the *Essentials of Logical Structure*, explain some elementary logical terms like relations, propositions, truth-values and systems. The distinction between deductive, inductive and mixed systems is here mentioned and explained.

There is also a short discussion of ambiguous words; and the principles governing symbolic expression are elucidated.

Mrs. Langer contrasts in the usual fashion natural languages with symbolic languages, and what are regarded by logicians as the shortcomings of the former are carefully mentioned.

I may here mention that each chapter of the book contains a careful summary, questions for review and suggestions for class work.

In Chapter IV, on *Generalisation*, further logical notions are discussed. Most important of these are variables, propositional functions (which Mrs. Langer calls "propositional forms"), quantifiers ((α) and $(\exists \alpha)$) and general propositions.

Chapters V, VI, VII and VIII deal with classes, the principal relations among classes, the universe of classes and the deductive system of classes respectively.

In the first of these chapters Mrs. Langer explains the distinction between individuals and classes, the notion of a "null-class", "unit-class" and a "universe-class".

In the second there are many useful diagrams illustrating the principal relations among classes.

The third chapter begins by distinguishing relations and predicates. Symbolic Logic—says Mrs. Langer—begins with relations and defines predicates in terms of these.

In a more advanced book much more would have to be said about this; but Mrs. Langer rightly, I think, avoids all more controversial issues and passes to discuss other problems. I should like to mention the section on Logical Punctuation, which I regard as particularly useful because I know that ever so many people familiar with advanced works on Symbolic Logic are still confused with regard to punctuation and are easily led into mistakes.

Chapter VIII is important because of the discussion of deductive systems. The essence of 'postulational systems' is here explained and the difference between axioms and postulates made clear. Mrs. Langer mentions in this connection all the most important characteristics of a set of postulates: coherence, contributiveness, consistency and independence.

The 'validity' of a deductive system of this sort is explained on familiar lines ("If the premises are granted, then the system follows thus and so").

Mrs. Langer emphasises that there is no logical guarantee for the truth of postulates and that a system built upon false propositions may be just as valid as a system based on true ones. This is no doubt true; but it may seem rather provocative to an elementary student, and I think that a few pacificatory remarks might have been useful.

Chapter IX deals with the Algebra of Logic. I always used to find this subject particularly boring; and I am glad to see that Mrs. Langer has succeeded in presenting it in as lively a form as I believe it is possible to do.

The next chapter, on *Abstraction and Interpretation*, is clearly important from the point of view from which the whole book is written.

The way logic proceeds by steps from totally concrete notions to totally formal ones is explained; three such steps being distinguished. First, by formalising the separate elements of K (a concrete system) we produce general propositions about specified concrete things; secondly, by formalising K and regarding it merely as the range of significance of the relation R we obtain general propositions about unspecified concrete things ("The greatest generalisation of the system KR "). The third step is the formalisation of R . Completely abstract propositions are obtained in this way.

Most important properties of relations are then discussed: there is also a discussion of the nature of postulates and of various interpretations of the Boolean algebra.

The calculus of propositions which has much occupied the attention of logicians in recent years is discussed in Chapter XI. The properties of some logical relations like ' \supset ' and ' \vee ' are given first; then the author discusses the propositional interpretation of Boolean Algebra, which leads naturally to the discussion of the propositional calculus as an algebra of truth-values. In turn, Mrs. Langer considers the "paradoxes" of material implication and the relation between implication and entailment.

Only the two-valued propositional calculus is discussed. More recent works on the many-valued calculi are omitted, probably because of their complexity and advanced character. Finally, there is a section on the "reflexiveness" of a propositional calculus.

The two final chapters, on the *Assumptions of Principia Mathematica* and on *Logistic*, may serve as a useful and critical introduction to the reading of this work and other 'logistic' approaches to mathematics.

Mrs. Langer emphasises the continuity between Boolean Algebra and Russell's work and mentions some of the perplexities of *Principia Mathematica*. Further, the reader is introduced to Peano's axioms for arithmetic, and the functional calculus is briefly discussed. Finally, Mrs. Langer outlines the structure of *Principia Mathematica*. It is in this connection that I think some information about the difficulties of the whole logistic approach, and further references to the works of Wittgenstein and Ramsey should be given: for the unwary reader may imagine that the subject is much easier than in fact it is.

The book ends with a short note on the value of Logic for Science and Philosophy, in which it is asserted that logic does not depend on any metaphysical views, although the converse is said not to be true.

There are two appendices, a short bibliography and a useful index.

I believe that Mrs. Langer's book, in spite of its shortcomings, is a real contribution to the teaching of logic and one of the best introductions to the subject I am acquainted with.

CASIMIR LEWY.

A History of Cynicism from Diogenes to the 6th Century A.D. By DONALD R. DUDLEY. London: Methuen & Co., 1937. Pp. xii + 224. 12s. 6d.

As stated in the preface, the author of this study desires to make a contribution to the social history of the ancient world and to the history of ancient thought, as distinct from ancient philosophy proper. Cynicism, therefore, interests him chiefly as a phenomenon arising at different times from similar or partly similar causes, such as economic and political injustice, religious enthusiasm, and a reaction from an over-developed urban civilization. He is less interested in the influence of Cynicism on the development of certain literary genres.

Especially in the first half of his work, however, he deals mainly with more special questions, as for instance, whether Antisthenes or Diogenes was the true originator of Cynicism, to what extent Zenon of Kition was influenced by Krates of Thebes, how far the early Cynics differed from one another in character and doctrine, and what connection there is between real cynicism and authors like Onesikritos, Menippos, and Bion of Borysthenes.

In his first chapter he tries to show that there was no direct connection between Antisthenes and Diogenes. He proves on the basis of new discoveries, made public by Mr. Seltman in a lecture at Cambridge, that I was wrong when in my dissertation on Diogenes I contended that, in all likelihood, the famous story about Diogenes' father as a maker of bad money was a legend. On the same evidence we can now also be almost sure that Diogenes came to Athens only after the death of Antisthenes.

This, however, it seems to me, does not preclude some influence of Antisthenian doctrines on Diogenes. He can scarcely have avoided becoming acquainted with them when coming to Athens. It is scarcely believable that he should have developed his own philosophy merely through his unpleasant experiences with society and by looking at a mouse (Theophr. in Diog. Laert. vi, 2, 22). For there are many more correlations between his philosophy and that of Antisthenes than the author acknowledges (cf. Studi di Filol. Class. 1927, p. 127 ff.). Both have the common hero Heracles. And the Stoics can scarcely have made up

the story of Diogenes' connection with Antisthenes merely because they wanted to trace back their school to Socrates; for they adopted also a good deal of Antisthenes' theory of knowledge (*cf.* *Hermes*, 1927, p. 470 ff.). But the author is certainly right in his contention that the writers of *διαδοχαί* made the connection appear much closer than it really was.

The next chapter contains very good portraits of Diogenes, Krates, and Metrocles, though not so brilliant as those drawn by E. Schwartz in his 'Characterköpfe'. But as to the *χρεία* I am still convinced that this special *γένος* was an invention of Metrocles (*R.-E. Suppl.* vi, 88) though anthologies and collections of *γνώμαι* and of anecdotes must have existed before his time. At least, there is no indication that the word *χρεία* was used in this sense previously.

In the chapter on third century Cynicism the full discussion of Kerkidas and of his political activities is very much to be welcomed. The mixture of Cynic doctrines with a program of social reform which characterises this man has remained rather unique in antiquity and is a curious phenomenon in itself, since real Cynicism considers all property as a hindrance to the freedom of the individual and, therefore, sees no need for a redistribution of wealth.

During the following two centuries Cynicism declined, and we hear little of genuine Cynics. The author, therefore, fills in the gap by discussing Cynic elements in the doctrines of other philosophical schools and Cynic influence on Hellenistic literature.

Towards the end of the first century B.C. we find the first trace of Cynic influence among Romans in a remark of Brutus which seems to indicate that M. Favonius followed this school of thought. The other persons mentioned by the author can scarcely be considered as Cynics.

It is only in the first century A.D. that Cynicism is really revived. But while the Cynics of the fourth and third century had been entirely indifferent to politics the Cynics of this time begin to make themselves conspicuous by criticising the government. This may have facilitated the connection between the most interesting Cynic of that time, Demetrius, and the Stoic opposition among the nobility. Demetrius, however, was not a pure Cynic. He discussed the nature of the soul with Paetus Thræsea before his death, and Cassius Dio says expressly that he blended his Cynicism with Stoic doctrines. His position between two schools may have something to do with the strange fact that, later on, he acted as counsel for the defence of the 'delator' Celer. But this riddle will perhaps never be completely solved. Apart from the special case of Demetrius, the criticism of the Cynics, it seems, was more directed against the general vices of the age, and aimed at the government only in so far as it shared in them, while the Stoic opposition pursued the definite political aim of restoring to some extent the power of the nobility and of the senate.

In the second century A.D. Cynicism seems to have flourished, and the literature of that time is full of references to it. The author describes fully the character of the outstanding Cynics of that time: Demonax, Oinomaos, Peregrinus, Theagenes, Sostratos, and of Dion of Prusa who, though not a Cynic proper, was greatly influenced by Diogenes—and by Antisthenes also. He mentions only briefly the crowds of beggar philosophers to whom Lucian refers so frequently.

The chapter on Cynicism in the following four centuries is very short and deals mainly with the orations of the emperor Julian against the Cynics and the relations of Gregory of Nazianzus with the Cynic Maximus. In an epilogue the author casts a glance at movements of later times which

bear some resemblance to Cynicism though they have no direct historical connection with it.

Dudley's work is certainly very valuable as a collection and able discussion of the contributions made to the history of Cynicism in recent times. Apart from this, its value, it seems to me, lies more in the vivid characterisations of single personalities than in the analysis of the social and historical background of this curious phenomenon.

It must, however, be said that, though one be aware of the difficulty of getting all Greek accents correct if the printer does not know how to handle them, one does not expect so many misprints of this kind—more than two hundred and as many as four in six consecutive Greek words—in a scholarly work, not to speak of *οἱ πένηται* as the nominative corresponding to the accusative *τοὺς πένητας* of the passage quoted, and of similar mistreatments of the German language also. In a quotation from Hesiod the order of the words is disarranged, which spoils the metre completely though the author indicates that he wants the passage to be read as verse. The name of Onesicritus is consistently spelled Onesicratus though there is not only no foundation for this in the tradition but such a form would also linguistically be very unusual.

K. v. FRITZ.

Time; and its Importance for Modern Thought. By M. F. CLEUGH.
London: Methuen and Co., 1937. Pp. x, 308. 12s. 6d. net.

THE present generation prides itself upon having learned to take time seriously. It is therefore not very surprising for a doctor's dissertation to be thick with the lore of change and of rate of change, of succession and of the measure of succession. The author of this particular doctor's dissertation, however, has done very much more than that. She has mastered a high proportion of the difficult and varied learning she lavishly displays, and has introduced a thoroughly respectable degree of orderliness into her exposition. Her account of the phenomenology of the subject is greatly assisted by her definite expertise in psychology, and her predominant interest in rather low-flying metaphysics is combined with a resolute determination to talk sensibly about physics. Her style is rather chatty, but not unpleasantly so, and is usually effective.

The book begins with a discussion of the psychology, the physics and the logic of her theme in successive chapters. The psychological chapter is something more than a good introduction. It is exceptionally well-informed and a good deal less sketchy than the author modestly suggests. The chapter on physics is careful and conscientious, respectful even towards t and t^2 , but resolutely defending a metaphysical wicket. In comparison the chapter on logic seems to me to be rather disappointing. It consists largely of prolegomena to the use of such terms as "conceptual time", "eternity", "an instant". The author has later a great deal to say about time's "alogical" character and "queer lop-sidedness", but is very reticent about the point in the chapter (I think) which should have discussed it fully.

Next we have five chapters upon the time-theories of certain philosophers—Kant, Bergson, Alexander, McTaggart and Dunne. A discussion of Kant's views on time is a necessary introduction to an adequate account of Bergson's. Mr. Alexander, a temporalist for all his insistence on space-time, framed his metaphysics with pronounced reference to both these

authors. McTaggart, it is true, had little sympathy with either of them, but his repudiation of time, combined with his strenuous attempt to show that it was better and more obstinately grounded than any other great illusion, is peculiarly appropriate to a comprehensive survey of the metaphysics of the subject, and Mr. Dunne's highly original views give the author the opportunity that she deserves.

In short, this part of the book is very well planned, and achieves considerable success in its presentation of a varied, important and difficult subject-matter. The chapter on Kant, I confess, does not seem to me to be nearly so good as its successors. I don't see how anyone could be expected to make much of it unless he already possessed an extensive technical knowledge of the critical philosophy, and I don't think that anyone who had all this technical knowledge would greatly admire Miss Cleugh's chapter. (Of course I may very well be wrong; but that is my opinion.) On the other hand, it seems to me that the exposition of the theories of the four others is clear and exceptionally informative, always excepting a small part of the exposition of McTaggart in the neighbourhood of page 158 (which is not free enough to be very clear).

That is Miss Cleugh's contribution to the analysis of her subject. She turns to synthesis in the Second Part of five chapters, together comprising about a hundred pages (they are rather closely printed). These chapters deal with prediction, irreversibility, becoming, contingency and reality. Of these the third seems to be central in its importance as well as in its position.

Miss Cleugh denies precognition, strictly interpreted, although she willingly admits probable forecasts, but the reason she gives in the chapter seems to me to be insufficient or at least to be insufficiently expressed. What she holds, she says (p. 202), "is that the 'happening' of events is ultimate, indefinable and unpredictable, though 'that E may happen' can in some cases be rendered very highly probable". If "happening" = "actuality", retrocognition and present cognition would be excluded as well as precognition. Regarding "irreversibility" she dislikes the phrase. Many processes are reversible, like the Duke of York's military manoeuvres. The truth she thinks is "unreversedness"—in other words that "time marches on". That is another way of signifying the unique status of absolute becoming, of coming to be; and the author appears to interpret actualization in this sense. She agrees in substance with Broad that "the future is nothing at all". In her own words "though the present is never the future as made, nevertheless it is the making of the future". She attempts to connect this view with the "continual instability" of the present and with the emergence of novelty; (but surely if the future is nothing at all, it would be nothing in the most repetitious universe). On page 247 n., she correctly points out that the proposition "England will be a republic in 1920" may not have been false in 1919. On the whole, I am of opinion that the substance of her contentions in this chapter are sound in the main, but that there is rather too much fumbling in her expression of them.

After defining various senses of "contingency", she deals with the sense in which *contingit* means that something happens, thus following (and attempting to surpass) one of Leibniz's clues. Here time's "alogicality" is heavily stressed. Indeed she says in her final chapter (p. 280) "If I were to attempt to answer in a single sentence the question 'What is time?' the answer would be 'The alogical element in the universe'". "Bradley was undoubtedly right", she remarks (p. 261), "when he

insisted that change is not amenable to logic." And again (p. 263) "certainly all our conclusions so far would seem to suggest that there is something peculiarly and essentially alogical about time. Its connection with change, and more particularly with that highly disreputable variety, becoming; its fleetingness; its unreversedness—all these involve that judged by the standards of a static logic, it is riddled with contradictions." No doubt it is—if the logic be "static", or if it apply only to the "static" in the sense of "timeless". By that reasoning, colour would be alogical if logic were colourless or had to deal with the colourless. But why should logic be "static"? On pages 282 and 283, Miss Cleugh says that she is complaining of "the present state of a branch of study" *viz.* logic. Is it really true that this branch of study at the present stage of its development is helpless as soon as time comes in? Much of Miss Cleugh's argument suggests that existence or actuality is "alogical"; and we have all heard that "existence" is not a characterising predicate. Temporality, however, is a characterising predicate (though it cannot characterise the "static" or non-temporal), and it seems to me that Miss Cleugh has omitted this simple reflection in her attempt to describe time "in a single sentence".

JOHN LAIRD.

Die Werttheorien, Geschichte und Kritik. By OSKAR KRAUS. Brunn: Rudolf M. Rohrer. Pp. xviii, 515. K. 140.

THIS bulky volume can be of use in two ways to the English student of philosophy who is interested in the theory of value. First, it contains a great deal of information about the recent literature of the subject, especially, of course, but by no means exclusively, the German literature. In addition to the accounts of, or references to, well-known writers and their works, it gives briefer notices of some less known writers, and often refers not only to books but also to dissertations and articles. The reader is likely quite frequently to find mention of writers and writings not previously known to him even by name. Secondly, the author is a devoted follower of Brentano and has edited some of his works; he is therefore in a position to give an authoritative account of Brentano's doctrines and of their relation to the allied or opposed doctrines of other thinkers. Kraus is one of the more orthodox disciples and has assimilated not only the earlier doctrines of the master but also their later modifications. As is apt to happen in such a case, he carries on a sharp (sometimes too sharp) polemic against those disciples who, like Meinong, Husserl, Ehrenfels, have diverged from the teaching of the master or failed to keep up with its later developments; but such polemics serve at least to bring into greater clearness the essentials of the orthodox doctrine. The two errors against which Kraus more particularly polemises are, on the one hand, the relativism of which Protagoras is taken as the earliest representative, and, on the other, the subsistent entities (the 'objectives' of Meinong, the transcendent realm of values, etc.) of which for the author the Platonic idea is the prototype.

To this brief characterisation of the volume it is perhaps desirable to add some critical remarks. The theory of value, regarded as a science prior to and more fundamental than ethics and economics, is of course a quite modern invention. Consequently in the sense in which there can be a history of *ethics* which goes back to Plato and Aristotle, there cannot really be a history of *theories of value* which does so, although this book

begins even with 'vorplatonische Wertlehren.' In point of fact the volume is taken up, to the extent of two-thirds, with the consideration of writings which belong to the last fifty years or so, from Brentano's *Ursprung sittlicher Erkenntnis* onwards. In the case of earlier thinkers the author's actual procedure is to pick out from their writings such doctrines as can be brought into relation with Brentano's, and to criticise them from the point of view of these latter. In some cases (e.g. Aristotle) he has a considerable amount of material to work upon, in others less; but the objection to the procedure at all times is that the doctrines under discussion are liable to be taken out of their proper setting and subjected to an external and inappropriate standard of criticism. A couple of examples will show what is meant. Kant is treated respectfully, but, since the doctrine of the KPV is of course very different from the doctrines of Brentano, it is condemned accordingly, while a pre-critical work, the *Untersuchung über die Deutlichkeit* etc., is preferred to it. Our author is aware that this preference will be regarded as paradoxical, but he does not seem to see the real ground of objection to it, viz., that it simply ignores the movement of Kant's own thought, and therefore is not genuine *historical* criticism at all. The other example shows in an even more striking manner the character of the author's criticism. At the end of a short chapter on Martineau and Sidgwick he refers (in a footnote) to Bradley in disparaging terms and then says: "Bradley fühlt sich Hegel verpflichtet, und das ist der Grundfehler seiner Philosophie—ganz besonders aber seiner Ethik und Wertphilosophie. Auf diesem Grunde kann nichts brauchbares geschaffen werden" (p. 204). In the author's view, then, the *Philosophie des Rechts* and *Ethical Studies* contain 'nichts brauchbares' in comparison with 'das epochale Verdienst' of Brentano's *Ursprung sittlicher Erkenntnis*, this Verdienst consisting in the 'Feststellung . . . [der] als richtig charakterisierter Emotionen als dem Ursprung aller Werterkenntnis und aller sittlichen Erkenntnis' (p. 173). Allowances may be made for the enthusiasm of a disciple, but the impartial reader will be likely to think that Kraus has a somewhat exaggerated idea of the importance and merits of Brentano's work. The following passage (p. 259 n.) does not stand alone: "Wenn heute noch über diese Dinge [den Wert, das Sollen, etc.] geschrieben wird, ohne . . . das zu berücksichtigen, was von Brentano und unserer Seite über diese Fragen veröffentlicht wurde, so sind wir schon aus diesem Grunde sicher, dass ein Fortschritt nicht erzielt werden kann." This kind of dogmatic assurance is hardly the state of mind in which to write philosophy and criticism.

H. B.

L'Année Psychologique. Trente-cinquième Année (1934). Paris, Librairie Félix Alcan, 1935. Pp. xix + 912. 120 fr.

In two parts as usual, this number contains in addition to over fifteen hundred abstracts seven original papers. There is also a review by Piéron of recent experimental work in the field of audition, which is in many respects the most valuable feature of the present *Année*. Piéron begins with a critical examination of the attempts made by physicists to measure 'noise,' and many psychologists will sympathise with his suggestion that some of the difficulties and inconsistencies in which physicists have involved themselves would have been avoided, had they confined themselves to their own field of study. Piéron next goes on to discuss the

influence of 'intensity' on pitch—'intensity' being understood as referring to the physical stimulus—then the origin of so-called 'subjective' sounds, and lastly the Wever and Bray phenomena, and the bearing of these phenomena on cochlear receptor localisation. This is perhaps the best summary of recent work on audition at present available. It is certain that none of the original papers in this issue have the same value for the experimental psychologist.

Two of the papers—both by N. Margineanu—are devoted to the new 'factor' analysis, the importance of which is, in the opinion of many psychologists, somewhat problematical from a psychological point of view, whatever may be its mathematical or statistical value. Piéron, in a highly technical paper—*L'évanouissement de la sensation lumineuse*—describes an investigation of the phenomena of intermittent stimulation of the retina, under different conditions of retinal adaptation, and with different frequencies and different intensities of stimulation. Two other papers are also rather technical. The first is by Fessard and Kucharski on time of reaction to sounds of different pitch and different intensities—*Recherches sur les temps de réaction aux sons de hauteurs et d'intensités différentes*—and the second by Chweitzer on the so-called 'electric taste'—*Contribution à l'étude du goût dit électrique*. The former of these is chiefly important so far as it raises problems of 'loudness' measurement, discussed by Piéron in the review already referred to. The latter shows that the 'electric' taste is rather complex. The closing of the circuit produces at the cathode a direct excitation of the nerve endings, and the bitter taste which results may be due to chemical changes, while at the anode an acid taste is produced owing to electrolysis of saliva and intracellular fluid. The opening of the circuit produces an acid taste at the cathode, sometimes with an accompanying sweet taste. These remain to be investigated.

The remaining two papers are of some general interest, though of less psychological importance. Jeanne Monnin describes some experiments bearing on different forms or types of intelligence, and Katharine Banham Bridges discusses the 'emotional' type in very young children, her data being supplied by the clinical study of problem children.

JAMES DREVER.

L'Année Psychologique. Trente-sixième Année (1935). Paris, Félix Alcan, 1936. Pp. xx + 818. 140 fr.

THIS issue as in recent years is in two parts, and contains in addition to the usual abstracts eight original papers and three 'notes'. The first paper—*L'électroencephalogramme de l'homme. Observations psycho-physiologiques relatives à l'action des stimuli visuels et auditifs*—is a discussion by Durup and Fessard of recent work in the recording of electrical manifestations of cerebral activity, with some experimental observations of the so-called Berger waves. While the paper itself is rather technical, the interest of this work is such that psychologists or philosophers will be well repaid for any trouble they may have with the technical language and allusions in following the discussion. Perhaps the most significant finding of the authors from a general point of view is the part played by attention throughout.

Gérard de Montpellier describes in the second paper some interesting experiments on 'retroactive inhibition' in animal learning—*L'influence*

de la similitude des tâches dans l'inhibition rétroactive chez les animaux. The type of learning studied was maze learning. The method adopted was to make the rats learn one maze, then make separate groups learn mazes presenting different degrees of similarity to the first maze, and finally make the rats re-learn the original maze. The author finds that the influence of retroactive inhibition is relatively restricted, and that the most significant result brought out by the experiment is the unitary character of the performance.

There are three papers with a definite bearing on vocational psychology. In the first of these Madame Piéron describes an experiment with school pupils on the tactual appreciation of thickness—*Recherches sur l'appréciation des épaisseurs chez les écoliers*. In the second D. Feller discusses the Stenquist tests of mechanical ability—*Quelques observations en vue d'une transformation du test d'intelligence mécanique de Stenquist*. He finds that considerable changes in the order of the tests are necessary if that is to be an order of increasing difficulty, and changes are also necessary in the scoring and in the material, to make the tests satisfactory: conclusions which have already been arrived at by other psychologists. In the third L. Chweitzer discusses the possibility of employing learning curves in a new way for prognostic purposes—*Sur la question du pronostic psychotechnique d'après les courbes d'apprentissage*. First of all the formula for the learning curve is obtained on the basis of a definite limited number of repetitions; then by means of the formula the efficiency after any number of repetitions may be calculated. The author finds, however, that the calculated result may deviate considerably from the actually obtained result when the number of repetitions is large—an obvious result of the well-known phenomena of plateaux in learning curves.

In a somewhat technical paper Piéron describes and discusses experiments on cutaneous sensations of vibration—*Recherches expérimentales sur la sensation vibratoire cutanée*. These experiments have some bearing upon the method of teaching the deaf described in a recent issue. Piéron concludes that the sensations in question are mediated by tactile receptors, that reaction time to these stimuli varies with the intensity and also the frequency of the stimuli, but that the measurements are not sufficiently reliable or constant to allow a law to be formulated. The most important of the three 'Notes' is also by Piéron. In this he discusses the place and orientation of the physiology of the senses. He criticises at length the theories of V. Renqvist on very much the same lines as he criticised recent work in the auditory field in the last issue.

In the remaining papers L. Copelman describes some experiments with the psychogalvanic reflex, which do not appear to have yielded much that is new, and Z. Bujas and A. Chweitzer describe some work on the so-called 'electric' taste, continuing the investigations described by the latter in the previous issue of *L'Année*.

JAMES DREVER.

Received also:—

- D. Hume, *An Abstract of "A Treatise of Human Nature"*, reprinted with an Introduction by J. M. Keynes and P. Sraffa, Cambridge University Press, 1938, pp. 32, 3s. 6d.
 R. G. Collingwood, *The Principles of Art*, Oxford, Clarendon Press, 1938, pp. xi + 347, 15s.

- W. Burkamp, *Wirklichkeit und Sinn*, 2 vols., Berlin, Junker und Dünhaupt, 1938, pp. 327, 538, M. 25.
- G. Matisse, *La philosophie de la nature, Tome III : L'arrangement de l'univers par l'esprit*, Paris, F. Alcan, 1938, pp. 275, 35 fr.
- A. C. Mukerji, *The Nature of Self*, Allahabad, The Indian Press Ltd., 1938, pp. xii + 359, Rs. 5.
- L. Vivante, *Il concetto della indeterminazione*, Florence, Vallecchi, 1938, pp. 281, L. 10.
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VIII.—PHILOSOPHICAL PERIODICALS.

JOURNAL OF PHILOSOPHY. xxxiv. (1937), 24. **H. G. Alexander.** *Language and Metaphysical Truth.* ["... language reflects the order of thought, and ... the order of thought reflects the nature of the world". "Here then, is the value of metaphysics, its value and its truth. The world must be seen from as many of its perspectives as our human capacities will allow. ... But understanding of it will end in dualisms, dualisms which contain no real discord, but which represent rather a suspended judgment, a question and a search."] **Bertram Morris.** *Beauty and Nature.* [States that esthetic value is put into a work of art by the author. Discusses whether nature "possesses value in itself ... or whether as esthetically indifferent, nature may be charged with esthetic significance only by us". Says the discussion shows "the identity between esthetic enjoyment of nature and of art".] **J. S. Boughton.** *The Sacramental Concept of Virtue.* [Objects to the division of moral virtues into means and ends. Suggests instead that a moral virtue be considered as 'sacramental', i.e. as a trait of conduct which (1) testifies to the fundamental fact of a unique relation among persons, and (2) reveals an additional element of worthiness in one or more of the persons so related.] 25. Abstracts of papers to be read at the 37th annual meeting of the eastern division of the American Philosophical Association, Princeton University, Dec. 1937. 26. **Dickinson S. Miller.** *Is There Not a Clear Solution of the Knowledge Problem?* [Goes through various objections to the views (1) that objects themselves are present to consciousness, (2) that knowledge is due to images given in consciousness representing objects. Holds himself that knowledge is "the mere presence of images to consciousness". Since image and object are the same to consciousness, "the principle that renders knowledge possible is the identity of indiscernibles".] xxxv. (1938) 1. **Mary E. Clarke.** *Cognition and Affection in the Experience of Value.* [Discusses in detail two theories to account for the parts played by cognition and affection in experiences of value, which rest on the supposition that value judgments are objective. Suggests that "the primary value concept is not 'good' but 'better'", and that till we know better "how to estimate comparatively the resultant goodness of objects having different 'good-making' qualities", arguments for the objectivity of good remain inconclusive.] 2. **George N. Belknap.** *Objective Value.* ["A theory of objective value holds that, when I say 'A is good', I mean unequivocally what I say". It "agrees that value occurs in a relational situation, but holds that the relation is internal, that it makes a qualitative difference in its terms, and that value is that difference".] **Newton P. Stallknecht.** *Protagoras and the Critics.* [Attacks the insistence of Boas on the multivalence of works of art. Claims that "it is only when the features of a work of art or a natural object are seen as compresent that genuine esthetic enjoyment is possible". Appreciation of any separate feature of a picture or poem, he says, is (1) not esthetic appreciation,

(2) not appreciation of the poem or the picture.] **Leo Abraham.** *Acquaintance, Description and Empiricism.* [Believes in an empiricism which rests on the principle of syntactic reducibility, namely "A person can refer to entities which are not complexes of his data; but the signs he employs in referring to such entities ultimately consist exclusively of signs referring to his own data". Seeks to distinguish this from the view that "Every entity to which a person can refer must be one with which he is acquainted, or else consist exclusively of entities with which he is acquainted". This he holds leads to a paradoxical phenomenalism, confusion of which with his empiricism has often been the cause of bringing discredit on the latter.]

3. Frederick Anderson. *Metaphysics as a Science.* [Traditional Empiricism, the scientific way, failed because its supporters attempted to make a certain system of it. Modern empiricism, the sincere, honest and diligent observation of the facts, can never hope for certainty, only for increasing probability. "To any one who demands more than this dubious assurance we can only reply, 'Friend you ask for better bread than is made from wheat'." **Waynex A. R. Leys.** *Types of Moral Values and Moral Inconsistency.* [Shows from the Basutos and Fijians that there are both immediate and instrumental values; and from the Marxists and Fascists that there are absolute values. Further that no ethical theory alters the fact that we are sometimes subject to conflicting duties.]

Dorothy Walsh. *The Poetic Use of Language.* ["Poetry . . . says inclusively what it means and means exclusively what it says." "Non-poetic language, on the other hand, never means merely what it says, and never says all that it means."]

4. Bruce Waters. *Positivist and Activist Theories of Causation.* [Seeks to show the purely verbal nature of various criticisms of Hume's theory of causation. Says that "Successful prediction is the single criterion for judging a causal relation", and that "the productive theory of causation seems to rest upon a confusion between art and science". "The philosopher endows nature with his own feelings and keeps alive the anthropomorphic tendency that he ascribes to primitive man."]

Marjorie Glicksman. *A Note on the Philosophy of Heidegger.* [Supports with examples the thesis that "Heidegger's philosophy is unique only in its rampant misuse of language and in its own emphatic claim to uniqueness".]

6. Charles E. Whitmore. *The Locus of Novelty.* ["On the whole, this survey of the possible relations of novelty is not calculated to persuade us that it is a convenient idea."]

Jared S. Moore. *The Significance of the Egocentric Situation.* [Applies Mill's methods to "call attention to the superior position which idealism, whether theistic or non-theistic, holds over realism in the comprehensiveness of its view of reality".]

Y. H. Krikorian. *An Empirical Definition of Consciousness.* [Says that we can be conscious of the experiences of others in the same way that we are conscious of our own. "Strictly speaking, it takes two minds to make a mind."]

7. Albert G. A. Balz. *Descartes—After Three Centuries.* [Review of works on Descartes by Jaspers, Couhier, Roth and Friedrich.]

Daniel S. Robinson. *The Cartesian Studies of the Ninth International Congress of Philosophy.* [Review of certain papers read at Paris, 1937.]

M. Whitcomb Hess. *A Note on the Individualism of Descartes.* [" . . . undeviating appreciation of the obvious."]

W. Donald Oliver. *The Logic of Perspective Realism.* [Supports the view that "This apple is sweet" alone, is non-significant; the significant predication implied by it in its ordinary use is "This apple is sweet for all normally constituted individuals". This is perspective realism, which allows the reality of secondary qualities, and stands on the dictum that

'Only the real can condition the real, and the real can be real only as it is conditioned'.] **Ralph W. Erickson.** *Planck's Concept of Causality.* [Examines Planck's attempt to maintain the Law of Universal Causation in face of the facts of modern physics. Says that it is based upon an alogical belief in the rational order of nature. Planck holds this belief because it has been found in the past to lead to scientific discovery. Erickson considers Planck's view of causality to be inconsistent with free will.]

PHILOSOPHY OF SCIENCE. IV, 4 (Oct., 1937). **V. C. Aldrich.** *Descartes' Method of Doubt.* [Public lecture delivered in 1937 at the Rice Institute in honour of the tercentenary of the appearance of the *Discours de la Méthode.*] **R. G. Tugwell.** *On the Troublesome "X".* ["X" is the "creative experience" or inventiveness. The article outlines a policy for promoting and regulating "creativity". "We have reached a stage of technology at which the likelihood of good results from inventiveness is almost wholly dependent upon social control. If we refuse to extend control and continue to rely on self-interested exploitation of new discoveries we shall suffer the penalty we deserve."] **M. Black.** *Vagueness.* [Points out that in a carefully defined sense all empirical terms are used vaguely. Within an appropriate range there is no definite point at which the application of a symbol is abruptly refused in favour of its negative. Vagueness is distinguished from generality—the application of a symbol to a multiplicity of objects; and from ambiguity—the association of a finite number of meanings with the same phonetic form. Vagueness is illustrated by the difficulty of distinguishing in a continuously varying band of colour the positions where one colour ends and another begins. This feature of language has tempted philosophers, notably Russell, to suppose that logic strictly applies only to abstract systems where symbols are 'precise', and not to empirical propositions. The awkwardness of such a view may be remedied, it is urged, by noting the 'frequency' (a defined term) with which a symbol is applied by the users of a language. A propositional function ϕx is then reinterpreted to mean $\phi(x, c) = "$ ϕ is applied to x with consistency c ". The laws of logic can be reformulated accordingly. It is argued that "deviations from the logical or mathematical standards of precision are all-pervasive in symbolism; that to label them as subjective aberrations sets an impassable gulf between formal laws and experience and leaves the usefulness of the formal sciences an insoluble mystery." And it is the purpose of the constructive part of the paper to indicate in outline an appropriate symbolism for vagueness by means of which deviations from a standard can be absorbed by a re-interpretation of the same standards in such a way that the laws of logic in their usual absolutistic interpretation appear as a point of departure for more elaborate laws of which they now appear as special or limiting cases. An experiment is given to illustrate the method in action.] **R. B. Lindsay.** *A Critique of Operationalism in Physics.* [Is mainly concerned with the views of P. W. Bridgman as set out in *Logic of Modern Physics*, 1927, and *The Nature of Physical Theory*, 1936. Defines operationalism as the view that no term used in physics is meaningful unless it denotes some definite operation which can be performed in laboratories. The attraction which operationalism exerts upon physicists is founded upon the conviction "that no contradictions can ever arise in actual physical situations". Thus the adoption of operationalism is held to be a means of excluding unfruitful (and especially philosophical) disputes

from the physical sciences. Lindsay demonstrates by a number of convincing examples drawn from recent advances in physics that in the interpretation of experiments disputes still arise. A more serious objection is that the specificity of physical notions required by the defined version of operationalism excludes the use of certain general terms such as potential energy or the magnetic field. "What we are insisting on is the right, which has indeed justified itself repeatedly in the past, of using in the construction of theories, concepts which are not defined directly in terms of laboratory operations." Lindsay favours an interpretation of physical theories which allows terms to have the kind of meaning associated with "implicit definition" within the framework of a system of postulates. His remarks upon the use of mathematical methods, on mechanical models and the verifiability of statistical statements are illuminating. (It is doubtful whether Bridgman would defend the extreme form of "operationalism" attacked in this article.)] **E. O. Sisson.** *Symbolic Logic and "Embedding Language."* ["Embedding language" is the language of common discourse, within which the specialised systems of logistic symbols find interpretation. Current expositions of logistic symbols, exemplified by Russell and Whitehead's *Principia*, Lewis and Langford's *Symbolic Logic*, and Carnap's *Abriss der Logistik*, are held to be defective in omitting explanations of primitive terms. "If it be said . . . that all 'explanations' must begin with unexplained words, the answer is that the enquiry must begin on the level of the widest and clearest general understanding, namely the 'embedding language'." The method is illustrated by critical discussion of the uses of *proposition* and *assertion* in the works mentioned above. (Unfortunately the author's own doctrine of the reverse and obverse of symbols is based upon a dangerously misleading metaphor.)] **E. V. Huntington.** *The Method of Postulates.* [The distinction between postulates and self-evident truths, the abstract character of a deductive system, and the part played by definitions in such a system, are among the topics discussed in this excellent, popular but precise, account of postulational method.] Discussion (Correspondence). Reviews and Notes.

V, 1 (Jan., 1938). **C. E. Bures.** *The Concept of Probability.* [Discusses, in a summary way, arguments for and against various theories of probability in the light of recent work. Favours a frequency interpretation and urges that even opposing views involve a tacit identification of probability and frequency. Thus Ramsey, who sets up an axiomatic system concerning degrees of partial belief, uses, in his definition of "degrees of belief", the "preference" of a subject (for one of several presented alternatives). This involves, the argument runs, a veiled appeal to the Principle of Indifference which can, in turn, be established only on the basis of observed frequencies. Somewhat similar objections are brought against Keynes' theory: the circularity in his definitions of probability is an unobjectionable feature of his system, considered as an axiomatic elaboration of the formal properties of the probability relation. When probability is *applied*, however, reference has to be made to judgments of irrelevance based upon a principle of indifference and so, once again, upon judgments of frequency. Bures makes no contribution to the solution of the knottiest problem in a frequency interpretation, the difficulty of defining a limiting frequency in a series whose terms are not generated by means of a mathematical law. He refers, however, to recent work by Nagel, Lindsay and Margenau which may provide a solution. Reference is also made to Reichenbach's form of the frequency theory and to an earlier paper by Nisbet which appeared in MIND in 1926.] **H. Reichenbach.**

On Probability and Induction. [A detailed reply to the critical review by Ernest Nagel of Reichenbach's *Wahrscheinlichkeitslehre* in MIND (1936, pp. 501-514).] **E. Nagel.** *Some Theses in the Philosophy of Logic.* [A short, but very clear and well-expressed, statement of the fashionable pragmatic view of the function and nature of logic. "Researches in pure logic within the last fifteen years show a marked tendency to reinstate the ancient but neglected view that the subject-matter of formal logic is discourse, that propositional forms are forms of discourse, and that principles of inference are ways of effecting a transition from one piece of discourse to another. We are beginning to see more clearly than ever that it is not at all necessary to go behind discourse in order to clarify or 'justify' the operation of logical principles, and to recognise that in conducting logical researches we are not exploring the anatomy of Pure Being, but clarifying, refining and amplifying a specifically human instrument." There is no advantage in supposing, as naïve correspondence theories do, that "the traits of the instrument (language) are simply distorted versions of the traits of the material upon which it works." Since there are various alternative analyses of discourse, "the view that there is such a thing as the basic logic, the real implication relation . . . is seriously mistaken, and in fact not easily compatible with the discovery (or invention) of the untold multiplicity of logical calculi". The principles of logic are "rules by means of which the meanings of our terms is explicated and a transition is effected between various groups of statements". They are thus "conventional" in being concerned with linguistic usages, but they are not arbitrary, "not in the sense that they are fixed by the structure of a reality antecedent to inquiry, but in the sense that they are shaped and selected by the instrumental character of discourse, by the goals of inquiry and discourse". A similar function is assigned to scientific theories.] **S. Skulsky.** *A Theory of Time.* [Hopes to reconcile philosophical controversies about the nature of time by propounding yet another theory. (This short paper is written in a pleasantly conciliatory tone; it needs expansion before the value of its suggestions can be decided.)] **R. H. Dotterer.** *Indeterminisms.* [Distinguishes various forms of determinism and explores their bearing upon ethical questions. The "indeterminacy" admitted by recent physics does not seem to have any important bearing upon the problems of ethics. "Free will" must be admitted to involve determination and to be inconceivable without it. On the other hand, the conception of moral responsibility presupposes the kind of indeterminism that is involved in a pluralistic view of the world.] **O. N. Hillman.** *Émile Meyerson on Scientific Explanation.* [A clear summary with ample quotations. Respects Meyerson's magnificent researches in the history of science, but does not agree that "the mind's preference for identity in time" thereby revealed is sufficient to establish the contention that explanation is identification.] **W. Moore.** *Structure in Sentence and in Fact.* [Considers various interpretations of a view attributed to Wittgenstein that "in order that a certain sentence should assert a certain fact there must . . . be something in common between the structure of the sentence and the structure of the fact". Dissents from this view, but arrives at an unhelpful conclusion.] **D. D. Lee.** *Conceptual Implications of an Indian Language.* [Description of the grammar used by the Wintu tribe of California. The language is remarkable for its elaborate syntactical devices for expressing distinctions which, if the interpretation can be trusted, are more philosophical than those we associate with the grammar of European languages. Numerous examples are produced in support of

the thesis that the Wintu "have integrated a number of discrete grammatical phenomena into one consistent morphological system, to express their fundamental categories: subjectivity versus objectivity, knowledge versus belief, freedom versus necessity".] Discussion (Correspondence). Reviews and Notes.

V, 2 (April, 1938). Editorial. *Where Is "Philosophy of Science"?* [A report on the progress of the periodical during its first four years of life.] **P. W. Bridgman.** *Operational Analysis.* [Makes a reply to Lindsay's critique of operationalism in *Philosophy of Science* (Oct., 1937) an occasion for a comprehensive statement of Bridgman's views. Emphasises the descriptive intention of Bridgman's work; it is concerned with analysing methods already used successfully by physicists, does not wish to set up any philosophical theory of the properties which must necessarily be part of every successful method. Physicists are found to be mainly concerned with "activities", either "in the perception and recognition . . . of sense impressions, or in the performance . . . of deliberate physical manipulation or of deliberate thought". "Operations" as used by Bridgman must be understood as identical in meaning with this wide sense of "activities". The word "operation" is not to be used in a sense so narrow as to exclude the "mental" operations of symbolising or thinking. Identification of "operation" with laboratory manipulation is the source of widespread misconception of operational technique. "It seems to me that the most superficial examination of what we do in any situation, even a situation which we might perhaps describe as predominantly 'physical', shows at once that 'mental' operations are involved, and further that no sharp distinction is possible between 'physical' and 'mental' operations." (The attention paid to "mental" and "verbal" operations in the remainder of this article is in line with the increasing emphasis in Bridgman's later work upon the theoretical aspects of science. The wide use of "operation" thereby involved smudges the outlines of what its more enthusiastic defenders have conceived "operationalism" to be. But criticism is disarmed by the modesty of Bridgman's pretensions.)] **A. F. Bentley.** *Physicists and Fairies.* [An investigation, in Bentley's usual picturesque style, of the ways in which distinguished writers in *Philosophy of Science* are bamboozled by their own abuse of the word "concept".] **F. S. C. Northrop.** *Causality in Field Physics in its Bearing upon Biological Causation.* [Laws in theoretical physics are expressed in terms of the relations between the "states" of a system at various times. In order to specify such a "state" we need to assign values to a set of numerical variables, e.g., to the "positions" and "momenta" of a number of "particles" constituting the system in question. Suppose the values of all these variables have been assigned for a time t_0 . If there is a mathematical formula by means of which the values of all the variables are uniquely determined for every subsequent time $t(t > t_0)$, we have what Northrop describes as a "necessary connection" between states. Causality in theoretical physics involves (1) a definition of the state of a system at a given time, and (2) the existence of a relation of necessary connection between the states of a system at different times. Northrop compares the definitions of state in quantum mechanics with those involved both in classical particle theory and classical wave theory. He attaches particular importance to the observation that the definition of state needed in classical wave physics is expressed in terms of "retarded potentials". In order to specify a field of force completely, at a given time t_0 , whereas the relevant values of the potential function at the point of observation

are those taken at t_0 , the relevant values of the potential function at all other points in the field must be taken for previous times $t_i (t_i < t_0)$. It follows that "there is no meaning in field physics, either theoretical or operational, to simultaneity of action of the forces at all the points in the field at the present time t_0 ". On the other hand, "Quantum Mechanics does not prescribe the use of retarded potentials in its definition of state. This entails that it admits a meaning for the relation of every point in the spatial field of force of nature at any present instant of time and, hence, returns to the Newtonian concept of causal action of past upon future for a given observer by way of the whole spatial field of force of nature in the present." Return to the Newtonian concept of simultaneity in quantum mechanics is held to be responsible for the difficulty of reconciling that subject with relativity theory. Northrop applies these considerations to biology by speculating whether organisms are electro-magnetic systems susceptible to description in terms of field physics. Some interesting experimental work by Burr, Lane and Nims is produced in evidence. Since 1935 "tens of thousands of observations have been made on different forms of life, from the egg of *Amblystoma*, a few millimeters in length, to the gross bodies of dogs and monkeys and men". Species, it is claimed, are found to show distinctive and stable systems of potential differences.] **D. C. Williams.** *Induction and the External World*. [Short reply to an article by E. J. Nelson, "The Inductive Argument for an External World", *Philosophy of Science* (1936). Claims to establish that the hypothesis of an external world has a finite antecedent probability.] **G. A. Lundberg.** *The Concept of Law in the Social Sciences*. [Reply to an article by E. Bisbee, "Objectivity in the Social Sciences", *Philosophy of Science* (1937). Argues that "the apparent difficulty of applying the methods of natural science to sociological phenomena flows not from any intrinsic characteristics of sociological data, but from the retention in the latter field of postulates long since repudiated in science."] **R. Bierstedt.** *The Meanings of Culture*. [Discusses four typical interpretations of culture: "(1) culture as the veneer of refinement, taste and comity which covers the most jagged surfaces of our barbarian ancestry; (2) the higher expressions of group life, such as art, religion, science, literature and philosophy; (3) all forms of group life . . . and (4) the organic unity or dynamic ethos of a social group in its growth and development". Favours the last of these, which "can clearly and distinctly be defined as a group of people sharing common knowledge, belief, art, law," etc. The advantages of this definition are explained in detail.] **V. Lowe.** *Mr. Miller's Interpretation of Whitehead*. [Defends Whitehead against Miller (see "Purpose, Design and Physical Relativity", *Philosophy of Science*, 1936). Whitehead "did not introduce teleology into his philosophy by appealing to scientific findings; and it is foolish to try to make him do so, if one has the idea of teleology at heart. For nothing can discredit this idea more than appearing to draw it out of the hat of relativity theory."] Reviews and Notes.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 43^e Année, N^o 3, Juillet, 1936. **P. Janet.** *La Psychologie de la Croyance et le Mysticisme* (premier article). [Begins by pointing out that "belief" (a) is not a phenomenon limited to religion, but present throughout life and the basis of all action, and (b) is not necessarily due to the presence of "truth" in the believer's mind: "it is not truth which produces belief, but belief which produces the appearance of truth". Analysing, next, the "constitution" of belief, Janet defines it as an attempt at adaptation to reality in order to make

action more effective. This is best seen in the act of making another believe something—an act which consists mainly of words inducing the other to accept certain promises and commandments awaiting future fulfilment. These verbal promises and commands, accepted by the believer as bases for action, may extend from the visible to the invisible world. The essential thing is the heightened energy of action, the confidence of success, the courage to battle against odds, which result from the attitude of belief. Janet likens it, quaintly, to drawing on one's credit at a psychological bank. Of course, the attitude has its dangers, to combat which men seek to rest their lives, not merely on beliefs private and personal, but rather on beliefs held in common with others; and, above all, on beliefs not purely sentimental, but experimental and rational. However, both these kinds of belief bring their own satisfaction, and neither can wholly serve as substitute for the other. Rational beliefs, in the form of "science", dealing with general principles, tend to starve the emotions of the individual, which are more adequately satisfied by religious beliefs. This is the general context in which Mysticism has to be studied. It is a mistake to identify mysticism with belief in general, and an even greater mistake to identify it with belief that is merely sentimental or false. Again, it is wrong to hold that every mystic is mentally abnormal. Some mystics have exhibited pathological phenomena, but others have been perfectly sane. Further, Mysticism is not the same thing as religion: there are mystics "outside of any religion". (To be continued.)] E. Forti. *La Nature de l'Émotion*. [A study of the phenomenology of emotion, from the standpoint of the psychology of behaviour (*comportement*), provided "behaviour" is understood as the behaviour of a *conscious* subject. Hence, the task is to distinguish and describe the forms and nuances of emotion on the plane of feeling, accessible to introspection, and also on the planes of its manifestation and expression in bodily action, and in imagination and thought. The author offers the following definition of emotion: "Emotion is an instinctive reaction, breaking in upon behaviour which is intelligent and well-adapted, reduced thereby to the initial phase of its course of manifestation, and accompanied by an increase in the internal discharge and the psychological reverberation". In other words, the instinctive reaction, coming into conflict with a dominant behaviour-set, suffers a reduction to its incipient stages of bodily expression, but the energy thus baulked takes the form of a heightened disturbance of feeling with prolonged after-effects. The phenomenological analysis which follows, proceeds within this general framework. It is marked by many acute observations, e.g., the distinction of four kinds of fear (*frayeur, épouvante, crainte, peur*); the distinction between the momentary gust (*bouffée*) of an emotion and a fit (*accès*) of the "same" emotion; the distinction between various forms of "emotive behaviour"; the phenomenon of "secondary" emotion, etc. In conclusion, the author connects his phenomenological analysis with Heymans' classification of types of character according as they are emotive-active or emotive-inactive, and again according as their "emotivity" is primary or secondary. The eight types which result are: the nervous; the sentimental; the choleric; the passionate; the sanguine; the phlegmatic; the amorphous; and the "apathic".] J. Kraft. *Défense de l'Aufklärung*. [The essence of *Aufklärung* is a challenge, in the name of Perfection, to all beliefs, institutions, traditions; to everything relative which pretends to be absolute; to everything temporal which claims to be eternal. It is the challenge to the good in the name of the better; hence, the spirit of reform, of progress.

The *libre esprit*, the man who is *aufgekläert*, has detached himself sufficiently from the worship of things as they are to perceive that no embodiment of the good answers fully to its own inherent ideal. From this point of view, the author replies to Hegel's criticism of the *Aufklärung* as having striven merely after "the vulgar ideal of utility". *Aufklärung* is opposed to dogmatism in religion and absolutism in politics. Spinoza was a supreme example of the spirit of *Aufklärung*.] **J. Picard.** *Syllogisme catégorique et Syllogisme hypothétique (suite et fin)*. [Continues his criticism of attempts to reduce categorical propositions and syllogisms to hypothetical propositions and syllogisms, with special reference to the theories of Meyerson, F. H. Bradley, Bertrand Russell, Spaier, H. Poincaré. The argument culminates in the assertion that "the categorical judgement, founded upon the intuition of certain relations, is more primitive and more fundamental than the hypothetical judgement, which is always an inference more or less mediate". On the way to establishing this conclusion, he defends "judgements of inherence" (as distinguished from judgements in which an individual is affirmed to be a member of a class, or an attribute to be a part of an essence) and thereby the subject-attribute relationship; he criticises Russell's theory of classes as logical fictions, affirming that there are "real classes", finite or infinite, composed of individuals and indistinguishable from the *ensemble* of these individuals; he defends the "concept" as a "system of relations objectively given in intellectual intuition".] **Variétés: E. Goblot.** *Souvenirs et Lettres, avec une introduction par F. Goblot*. [Two autobiographical fragments and four letters, the former written by Goblot in 1927-28, the latter addressed to an unknown Protestant pastor between 1870 and 1876. The former relate how he first came to realise that he had ceased to believe in the Roman Catholic religion; the latter defines his attitude to religion in general, under the influence of Renan. F. Goblot has provided a short introduction, placing these facts in their proper context in the whole development of E. Goblot's thought. Here is the key-note of that development: "The whole life of a philosopher is passed in fighting against Materialism and defending the cause of Spiritualism".] **Notes: P. Masson-Oursel.** *L'Esthétique indienne*. [Sanskrit has no word corresponding to our "Beauty". Indian art has sprung from the craftsman's technique, which in turn has its origin in ritual technique. Religious experience demanded expression in imagery, and in response to this demand for images the craftsman produced that wealth of symbolic figures and designs in which Indian art abounds.] **Études Critiques: Ch. Blondel.** *La Mythologie primitive, d'après M. Lévy-Bruhl*. [An appreciative summary of Lévy-Bruhl's book, *La Mythologie primitive, le Monde mythique des Australiens et des Papous*, stressing the support given by this study to Lévy-Bruhl's well-known thesis concerning the difference between primitive and civilised mentality.] **Supplément: New Books, French and Foreign. Periodicals.**

43^e Année, N^o 4. Octobre, 1936. **Ravaisson, Quinet, Schelling.** *Lettres, avec une introduction et des notes par P.-M. Schuhl*. [Two letters from Schelling to Ravaisson, belonging to the years 1838 and 1839, respectively; five letters from Quinet to Ravaisson; two letters from Ravaisson to Quinet; and a number of short extracts from some thirty further letters exchanged between Quinet and Ravaisson. The annotation has been very well done and the numerous allusions to people and books, etc., are well explained by M. Schuhl. In the Quinet correspondence occurs an interesting comparison: "The heritage of Hegel is like that of Alexander the Great. His generals are tearing one another to pieces. The point at

issue is who has the true tradition". Schelling's first letter contains interesting comments on Aristotle, whom he praises for his contribution to "negative" philosophy (in Schelling's language = rational thought, as apprehending only appearance, in distinction from "positive" philosophy which reaches reality). In both letters Schelling complains of the lengthy delays (from two to five months) in letters reaching him at Muenchen from Paris.] P. Janet. *La Psychologie de la Croyance et le Mysticisme (suite)*. [The first section of this second instalment of the article deals with what Janet calls the "preparatory scepticism" of the Mystics, i.e., with the denial of the evidential value of all sense-perception and thought, and the systematic effort to emancipate the mind from its bondage to these, in preparation for the direct and immediate reception of the Divine into the soul. This attitude is illustrated from Jean de la Croix's *La Nuit obscure*; even the use of language is to be avoided. Miracles, visions, ecstasies, fastings, etc., are all to be rejected: let "Nothing" be the sole object of thought. To know God one has to rid oneself of all human knowledge. Janet connects this attitude, on the one hand, with the Pseudo-Dionysius and Plotinus, and, on the other hand, traces it in utterances of Nietzsche, Tolstoi, Gogol, and others, and even in the less exaggerated forms of anti-intellectualism in thinkers like Meyerson and Bergson. All these thinkers, however, cling to certain beliefs (*croyances*) as necessary to their "psychological equilibrium"; and the fact that these beliefs are in conflict with logic, or, at least, are not logically demonstrable, only leads these thinkers to belittle logic. They value the "sentiment of mystery" which is produced by the conflict between reason and faith. Janet confesses that he was once inclined to regard this sentiment of mystery as the essence of religion. But he now rejects this view because "to the genuine believer there is nothing mysterious in the universe": God explains all for him. This point is further elaborated in the fifth section of the article. The true Mystic is not content with the mere negations of scepticism: he negates only to make room for a positive affirmation on a higher plane. All modern thinkers sympathetic to Mysticism make this claim for it (e.g., William James, Boutroux, Bergson). Some, like Richet, are thereby even led into sympathy with Occultism. This brings Janet to a discussion of the pathological and abnormal states incidental to the ecstasies of some Mystics. On the Mystic explanation of these, that the soul which has emptied itself is then filled with God, Janet makes the biting comment that modern epileptics, whose minds are most thoroughly emptied, are left regretably unfilled by God; and he gives a medical explanation of these states as based on nervous exhaustion. If it is said that pathological states are not essential to Mysticism, then no special claim should be made for the alleged "revelations" received in these states. In fact, such claims are not part of the experience itself: they are subsequent rationalisations and interpretations of it. The final section of this instalment deals with "intuition". The claim to intuition, in the sense of divine inspiration, is a commonplace (*banal*) among mental patients; nor are the contents of these inspirations necessarily true or good or beautiful. In a sense, the poet and the scientist, too, are "inspired"; but the Mystic's inspiration professes to be what the scientist's never is, viz., immediate, absolute, and from God. These claims are not to be taken at their face value: the critics of "intuition" have compelled even those thinkers who, like Bergson and Le Roy, claim to employ intuition, to admit that the content of intuition may be mistaken, and that its value has to be assessed by subsequent reflection. (To be continued.)]

R. Berthelot. *L'Astrobiologie et la Pensée de l'Asie: Essai sur les origines des Sciences et des Théories morales (suite).* [The ninth instalment of this mammoth article treats of Christianity as a mystery religion, in the doctrines of which the author stresses the influences of astro-biology, and, in general, of Eastern religion and culture. Of St. Paul he says that he strove to refashion, in symbolic form, the unity of the scattered ideas which sprang, on the one hand, from solar or astro-biological religions, and, on the other hand, from agricultural cults of salvation and immortality. Here is another typical utterance: "In the European Middle Ages, the spirit of Asia and more especially of Persia achieves a kind of revenge over the spirit of Greece and of Alexander". Above all, the author traces these influences in St. Augustine's *City of God*, in his *Confessions*, in his doctrines of grace and predestination. Not for nothing had St. Augustine been a Manichaean for nine years before his conversion to Christianity. His conception of original sin and deliverance by God's grace are echoes of Chaldean astro-biological doctrine.] *Études Critiques: L. Febvre. De Spengler à Toynbee: Quelques Philosophies opportunistes de l'Histoire.* [Toynbee is only another Spengler, a brilliant amateur who loves to paint large canvasses, full of "sickly errors and of illusions" which betray a "poison of the spirit"! Both Spengler and Toynbee are like magicians who cause the most impossible rabbits to appear from crazily-constructed hats. In other words, they read philosophical formulæ into the facts of history, which they carefully select or distort to suit the formulæ. Toynbee's criticisms of what he regards as the uninspired fact-grubbing of the average historian is like Don Quixote attacking imaginary windmills. *A Study of History* is full of large and vague generalisations which either are so vague that they fit anything and everything, and therefore explain nothing; or else gain a spurious sort of support from the trick of jumbling facts together without regard to the anachronisms committed: "telescoping Assurbanipal into Saint Louis and Sesostris into Lenin". In short, the work of a clever charlatan.] **G. Aillet.** *Histoire et Politique, à propos d'un livre et d'un débat récents.* [Discusses Maxime Leroy's *Introduction à l'art de gouverner* against the background of the record of two famous discussions, in the Société Française de Philosophie, between Simiand and Seignobos, in 1906 and 1907, concerning the question whether, and what, the statesman can learn from history. Gives, incidentally, an interesting discussion of Cournot's view of the place of accident or chance in history. Ends with the plea that the historian is entitled to go beyond a mere dispassionate ascertainment of facts by passing judgement on the facts from the point of view of his ideals, "with his noblest feelings".] **Notes: D. Baumgardt.** *Maimonide huit cents ans après sa naissance.* [European civilisation received its two most powerful impulses from the Greeks, on the one side, and from the Jews, on the other. The former contributed reason and science, the latter faith and religion. Maimonides strove to synthesize and reconcile these two conflicting heritages, being at once a "radical rationalist and an infinitely believing Jew". His influence on Albertus Magnus, St. Thomas Aquinas, and Master Eckhart, all of whom quote him freely and often, was very great. But, in the days of Maimonides the conflict was fought out around problems of theology and cosmology: the conception of God as creator and his relation to the world. At the present day, once again there is a conflict between knowledge and faith, but now the conflict rages rather around questions of "moral metaphysics". The efforts in modern Europe to build a new social order of greater justice, to organise economic relations so as to realise ampler human values—these

efforts rest on "acts of pure faith, not on acts of knowledge".] **R. Berthelot.** *A propos d'un malentendu.* [A brief note pointing out that the author has been misunderstood by P. Janet, when the latter characterised him as a "positivist", whereas actually he is an "idealist" who acknowledges Kant, Descartes and Plato as his philosophical masters.] *Table of Contents:* Authors, Articles, Supplements. *Supplément:* Reviews of Books, French and Foreign. Periodicals. Obituary: Ferdinand Toennies.

REVUE NÉO-SCOLASTIQUE DE PHILOSOPHIE. Tome 41 (Deuxième série), Fév., 1938. **A. Dondeyne.** *L'abstraction.* [The true character of abstraction is a question of first-rate philosophical importance. The human mind is not simply creative, and the starting-point of its knowledge is always a concrete reality given in presentation. Its demand for knowledge can only be realised by attaining metempirical values, the necessary, the universal, the transcendental, the transcendent, and these are not to be found in the intuition of the concrete datum, but have to be reached by abstraction. To attempt to find a foundation for them in the experiential starting-point is to empty them of their content; to deduce them from a subjective *a priori* compromises their objectivity. It may be argued, then, that if abstraction is no more than analysis of the concrete datum, we are committed to empiricism; if it is regarded as a genuine "construction" of metaphysical values, we fall into subjectivism. (To be continued.)] **A. De Waelhens.** *Sur les origines de la pensée de Hamelin.* [It is a misconception to look for the source of Hamelin's philosophy either in French writers or in post-Kantian Germans. The influence of French thinkers on his work is secondary; he was all but completely ignorant of all the Germans except Kant and Leibniz. The 'source' of his thought is to be found in Kant. His object is to eliminate all that is incompatible in Kant with "idealism," and, in particular, to replace Kant's account of space and time as forms of *intuition* by making them pure constructions of the intellect. In spirit he is aiming at the same kind of correction of the *Critique* which Kant was attempting in the *Opus postumum*. Of Fichte Hamelin knew very little, and, in spite of apparent resemblances, his "dialectic" differs fundamentally from that of Hegel; it does not exhibit itself in history, the realm of the contingent.] **A. Guggenberger.** *Zwei Wege zum Realismus.* [A comparison and contrast of N. Hartmann's doctrine of *Erkenntnisponderanz* with the *dynamisme intellectuel* of J. Maréchal. Both have the defect of attempting to find the ground of our conviction of the reality of the objective world in something extrinsic to the act of apprehension, Hartmann in our emotional life, Maréchal in an intellectual orientation towards the "supreme good" of the intellect, God.] **H. Bédoret.** *Les premières traductions tolédanes de philosophie. Œuvres d'Alfarabi.* [Notes on the evidence at present in our possession of the authorship of the twelfth-century versions of Alfarabi.] *Études Critiques.* **W. Goossens.** *Bulletin de philosophie religieuse.* **G. de Montpellier.** *Psychologie.* **F. Van Steenberghen.** *La littérature albertino-thomiste (1930-1937).* *Comptes rendus, Chroniques, etc.* **Supplément.** *Répertoire bibliographique, livraison de Février, 1938.*

IX.—NOTES.

TO THE EDITOR OF "MIND".

SIR,

Prof. Dr. Hans A. Grunsky, whose book, *Seele und Staat*, was reviewed by me in the January issue of MIND, has asked me to correct a misstatement unintentionally made by me, and also suggests a better translation of one of his technical terms.

The correction affects my account of the circumstances of his appointment to the Chair of Philosophy at the University of Muenchen. My account was based on information received from a senior member of the Professorial Staff, whose statements I had so little reason to doubt that it never occurred to me to verify them from Dr. Grunsky himself, when I subsequently made his personal acquaintance. Dr. Grunsky now informs me that his appointment was made in the perfectly regular and usual way, on the initiative and proposal of the University, and that the proposal was, "after several months' consideration by various Ministries", duly approved. By way of further correction of the information given to me, he also tells me that his Doctor's thesis was concerned, not with Hegel, but with the problem of Simultaneity in Einstein's Relativity Theory. He is about to republish that thesis, which contained a "severe criticism" of Einstein, with the addition of a new chapter on "Einstein und der Talmud". It is only fair to Dr. Grunsky that these corrections should be published at the earliest possible moment; and the only comment I venture to add is that the approval of the Ministries must, of course, be understood as including the approval of the *Partei* authorities, seeing that *politische Zuverlaessigkeit* is one of the essential qualifications without which no one can be appointed to a teaching position at a German University.

Dr. Grunsky further suggests to me a better translation of the name of one of the four "poles" in the diagram reproduced in my review on p. 95. His German phrase is *Pol der Hingenommenheit*—a word which, I must frankly confess, I found it impossible to translate to my satisfaction. My attempt, "pole of receptivity", strikes Dr. Grunsky, no doubt rightly, as liable to suggest too much a mere passive undergoing of impressions, whereas he intends his term to convey "an outward-directed psychical activity". To be *hingenommen* may be paraphrased by "having one's mind wholly occupied, or possessed, by something," with the implication that one is emotionally satisfied in being thus possessed and lives for the thing which possesses one. Dr. Grunsky suggests "pole of being transported", in the sense of "being enchanted". Considered as clues to his meaning, these suggestions are undoubtedly helpful, but I do not think they can pass as adequate equivalents in translation. Nor do I feel any

more satisfied with other experiments of my own, such as "pole of self-surrender", or even "pole of ecstasy". I still think the term does not permit of an adequate rendering by any single English word.

May I, in conclusion, take the opportunity of this letter to draw the attention of all who may be interested in the polemic of National-Socialist thinkers against Jewish philosophers and their influence on European, and above all on German, thought, to two other recent publications of Dr. Grunsky, viz., an article on "Baruch Spinoza", published in the second volume of *Forschungen für Judenfrage* (Hamburg, 1938), and a pamphlet, entitled *Der Juedische Einbruch in die Philosophie*, published by Junker und Duennhaupt Verlag, Berlin, as No. 14 of the series, *Schriften der deutschen Hochschule für Politik*. It seems to me that, sooner or later, this polemic will have to be examined and answered on its merits. It is not, in my opinion, a thing simply to be ignored.

R. F. ALFRED HOERNLÉ.

University of the Witwatersrand,
Johannesburg,
April 5, 1938.

29th April, 1938.

TO THE EDITOR OF "MIND".

DEAR SIR,

I fancy that most authors, after they have published two or three books, become so accustomed to the general ineptitude of reviewers that they no longer take much notice of what any reviewer says. Even when they get an exceptionally foolish review they say nothing. Silence is usually the best policy. The reviewer has the last word. Also the author who answers back runs the risk of seeming to be one who cannot take, without whining, a spanking which he has probably richly deserved—a spectacle which ministers to the secret sadistic delight of other philosophers. But I think it is good that someone should occasionally take these risks. It is salutary that the incompetent sort of reviewing with which authors so often have to put up should occasionally receive an airing, and that reviewers should sometimes find themselves reviewed.

The occasion of these reflections is Mr. Laird's critical notice of my book, *The Concept of Morals*, in the April issue of *MIND*. The notice consists mostly of page after page of pseudo-criticisms, by which I mean criticisms which arise from not having taken the trouble to understand the author, or from sheer muddle-headedness on the part of the critic. To analyse all Mr. Laird's pseudo-criticisms would be a profitless task. I give two examples.

(1) Mr. Laird writes: "It is hard to believe that a discussion that begins with emphasizing the extreme rarity of unselfishness¹ and ends by emphasizing the universality of altruism is genuinely consistent." How

¹ Mr. Laird writes "selfishness". I charitably assume that this is a slip of the pen, or misprint, and not sheer carelessness.

ridiculous the poor fool of an author looks after that! But the author's doctrine was that while the *practice* of high unselfishness is rare, the *theory* or *ideal* of altruism is (at least in germ) universal. A whole chapter is devoted to this. Either Mr. Laird has not read the chapter, or he has not understood what he has read. If he really thinks, after reading the book, that the meaning of it is that altruism is universal in a sense which is inconsistent with the admission of general selfishness, then I can only suggest that he had better give up reviewing philosophical books.

(2) I contended that the Utilitarians were mistaken in supposing that happiness is a sum or aggregate of pleasures. Mr. Laird comments: "He persists in arguing about a sum of pleasures without remembering that they were concerned with the balance of pleasures and pains." What an incredibly muddle-headed remark! Does Mr. Laird mean that the Utilitarians did *not* conceive of happiness as a sum of pleasures, but rather as a balance of pleasures and pains? If so, he is talking ignorant nonsense. "By happiness", writes Mill in his second chapter, "is intended pleasure and the absence of pain" (*italics mine*). The Utilitarian doctrine is that happiness is a sum of pleasures, unhappiness a sum of pains, and the usual hedonic state of man a balance of happiness and unhappiness, *i.e.*, a balance of pleasures and pains.

If Mr. Laird's meaning is only that the Utilitarians frequently talked about the balance of pleasures and pains, this is of course true but utterly irrelevant to my argument that they were mistaken in identifying happiness with a sum of pleasures.

Mr. Laird can have his choice between having made a complete muddle of Utilitarianism or a complete muddle of the argument in my book which he is purporting to criticise.

Of course, not all Mr. Laird's criticisms are as foolish and incompetent as these two. He makes occasionally some genuine points. And these are gratefully received.

Yours, etc.,
W. T. STACE.

[The reviewer writes:

Like Mr. Stace, I hold that every author should have reasonable opportunity for defending himself against his reviewer. Rightly or wrongly (but without intending any discourtesy to Mr. Stace) I have decided not to continue this controversy. I have, of course, to express regret for the carelessness which caused me to allow "selfishness" to be printed in my review when Mr. Stace's word "selflessness" was on my typescript.]

ERRATA.

In the April number of "MIND" the following misprints should be corrected:

p. 245, l. 16, for "selfishness" read "selflessness";

p. 276, l. 5, from bottom, for " $pa(x_1[x_2x_2])$ " read " $pa(x_1[x_2\bar{x}_2])$ ";

and, bottom line, for " $pa(x_1[\bar{x}_1\bar{x}_1])$ " read " $pa(x_1[x_1\bar{x}_1])$ ".

MIND ASSOCIATION.

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